

THE  
UNIVERSAL MERCHANT:

CONTAINING THE

Rationale of Commerce,

In THEORY and PRACTICE;

An ENQUIRY into the

NATURE and GENIUS of BANKS,

Their POWER, USE, INFLUENCE and EFFICACY;

The Establishment and Operative Transactions

OF THE

Banks of London and Amsterdam,

Their CAPACITY and CREDIT calculated and compared:

An ACCOUNT of the

BANKS of *Hamburg, Nuremberg, Venice, and Genoa,*

Their CREDIT and COURSE OF BUSINESS;

The DOCTRINE of BULLION and COINS amply discussed; and  
therefrom the Course and Par of EXCHANGE regularly deduced.

EXEMPLIFIED BY

REMARKS HISTORICAL, CRITICAL, and POLITICAL.

Wherein the BEST WRITERS, Ancient and Modern, Foreign and  
Domestic, are duly considered and referred to.

Adapted equally to the USE and INFORMATION of GENTLEMEN  
who propose to make a Figure in Public Affairs, as to the MERCHANT,  
FACTOR, BROKER, and REMITTER.

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L O N D O N:

Printed by C. SAY, for W. OWEN, at *Homer's-Head*, near *Temple-Bar*.

MDCCLIII.

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TO THE RIGHT HONOURABLE  
HENRY PELHAM, Esq;  
Chancellor of the Exchequer,  
FIRST LORD of the Treasury,

AND ONE OF  
HIS MAJESTY'S  
Most Honourable Privy Council,

THIS BOOK, calculated for GENERAL USE,

Is with the Greatest Respect inscribed, by,

S I R,

*Your Most Obedient Humble Servant,*

William Horsley.

S I R,

I HAVE the greater Pleasure in presenting this Work to your Consideration, as it is the Performance of a Foreigner resident amongst us, who participates with us the Sweets of Liberty, and who gratefully makes us the best Returns in his Power, for the Benefit he receives from the due Execution of equal Laws, and for the Encouragement given under them to Wisdom and Virtue, the true Sources of that shining Figure we make in the com-

[ a ]

mercial

## D E D I C A T I O N.

mercial World; and which will always enable us to command Respect from our Neighbours.

His Views, in the reasoning Part, are to establish an universal social Maxim, That *the Wealth of a Nation is the common Benefit of its Neighbours, and that where Commerce flourishes, the People neither merit Envy, nor are to be feared*; as in the former, good Examples should only produce a noble Emulation, and in the latter, it is evident to ourselves, that we are not the more inclinable to warlike Enterprize for being rich and prosperous.

The Respect which Commerce commands, is very different from that which Conquest excites; in the one we make all we negotiate with our Friends; in the other, those we conquer our Enemies; the first address us with a bounteous Benevolence, the last acts with a retracting Hand; and while the one enriches us with a fixed and lasting Reputation, the other only destines us to an imaginary, or impermanent Fame, leaves our Security ever questionable and open to such secret Attacks, as a just Resentment of Injuries is capable of inspiring.

SOLOMON, the Scripture-celebrated King of *Judea*, is, so far as I understand his History, more distinguishedly illustrious for his Wisdom, in respect of the enriching his People by Commerce, than for his Success in War, Skill in Architecture, or for his philosophical or religious Writings. And I think, on this Principle, *England* has out-liv'd the Eclat of many fighting Empires, and *London* been gradually growing into Splendor, while other Capitals have suffered under the various Vicissitudes of Fortune, the natural Consequences of vain Contention, and idle Ambition; and our Race for Glory infinitely more accelerated by the Arts of Peace, than by the most eminent Acts of our warlike Ancestors.

## D E D I C A T I O N.


RICHELEAU saw this, and imitated BURLEIGH's Conduct: If his Maxims have opened the Eyes of the *French*, and induced them to consider Commerce as an essential Blessing, their Emulation of the *English* has been truly Praise-worthy; and, from Circumstances, it seems apparent, that the *Cardinal's* Successors think their commercial Acquisitions much superior to the ideal Glory of Conquests; whereby in attempting to make the rest of Mankind unhappy, that Nation has been often reduced to imminent Hazards and Distresses.

All *Europe* seem, at present, inclining to the same Opinion; but from hence Nothing results, reasonably to be dreaded: We have hitherto led, and I hope shall always lead in Commerce, as command in Arms; nor can it be questioned, so long as our Rights and Liberties are supported by the best of Governments, our Welfare and Happiness duly attended to, and our Skill and Industry reigns supreme.

The AUTHOR, after reasoning the Reader into right Notions of Trade, where he falls into many of Mr. WOOD's Sentiments, enters into an Enquiry concerning *Bullion* and *Coins*; thence to consider the Nature, Operation, and Effect of *Banks* in general and in particular; and these again interweaves with a critical Examination into, and *Calculation* of *Exchanges*.

His Manner of pursuing these Subjects is different from any Thing I have seen; and that it might be at once concise and perfect, and appear consentaneous with the best Judges, where there is not any evident Mistake, or where Time has made any Alteration, Sir ISAAC NEWTON's Tables are affixed, attended with such Remarks as were necessary to illustrate and reconcile them to the present foreign Standards.

After



## D E D I C A T I O N.

After confidering the Whole in the Light, as calculated for the Curious and Adepts, it was thought requisite to open the Subject to young Practitioners by an *Introduction*, and to give them an Infight into the original Nature and Properties of the finer Metals, by a *Supplement*.

Thus far, Sir, it seemed necessary to inform you of the Intent, not presuming to anticipate your Judgment as to the Execution; but humbly apprehend, that the Performance in a particular Manner claims your Patronage, as the AUTHOR, though an *Alien* by Birth, is an *Engliffman* by Interest: And as every Man's Skill, well apply'd, affifts our natural Advantages, this may, amongst others, materially contribute to the blowing up the Embers of genial Industry into a bright and permanent Flame, and which may, by its luminous Expansion over the whole Circle of the Globe, convey to distant Realms, an adequate Idea of fuch happy Pursuits as challenge an important Share in the Interest of the State, and in the Utility of a Free People; *Commerce* being to us what the Son of POLYMAUS was to the *Theban-Greeks*, the *Soul* of his own Country, and the Director of the Fate of all the neighbour Nations.

INTRO-

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T H E

# I N T R O D U C T I O N .

*M*ERCHANTS trade in various Commodities, and amongst the rest in Monies. *Gentlemen* who deal not in the former, cannot avoid being concerned in the latter; and as they are not Dealers in any other transferable Commodities, it seems not amiss that they understand this, and for many Reasons the Nature and Value of the Bullion whence Money is coined. The Knowledge of Bullion introduces to our View the Nature and Value of *foreign* as well as *domestic* Coins; and when we understand this, the Value of *Exchanges* naturally ensue.

The Acquaintance with *Exchanges*, however it may seem to some the Business of Merchants only, in a commercial free State, falls properly under the Cognizance of Gentlemen, particularly those who have, or intend having any Share in the Legislature; and still more materially such who are in the immediate Direction of public Affairs, as without a masterly Skill in Bullion and Coin, it is impossible to understand *Exchanges*, whence singular Inconveniencies may happen on certain delicate Emergencies. There is not any Article of Trade in which the *Gentleman* should not be at least a tolerable Theorist, for many obvious Reasons; but in Bullion and Coins, whereby other Articles are usually adjusted, he should be practically skilful.

A Defect of this Knowledge has been the Cause of many Disorders in the State, resulting from the raising, depressing, or debasing the current Coin of the Kingdom ; and though it has been more rare here than in some other Nations, has too often happened, and so much discomposed the common Welfare, as engaged the whole Attention of two different \* Reigns to rectify ; and without which Rectifications our Trade would have probably been in as miserable a State as our Money.

\* ELIZ. and  
WILL. III.

There have been three Ways of varying the Standard ; the *first* is when the Coins in their respective Denominations have been made current by Law, at more or less Pounds, Shillings, or Pence than formerly. The *second*, when such Coins have been altered in their Weight, and yet continued current at the former Rates. The *third*, when the Standard was either debased or enriched in the Fineness of the Gold and Silver ; yet the Money retained its former Estimation.

How far this Subject has been entered into by the Learned and Skilful heretofore, will appear in due Place ; but I believe the Attentive will agree, on the Perusal of the following Work, that a more critical Examination was necessary, to give it a perfect Finishing ; and as what ought to be, is there clearly reconciled to Truth and Exactness : So the proper Object of this Introduction, is to shew what, through a long Series of Years, it has been, which is done to open the Understanding, and command the Reader's Attention to a Course of Reasoning that I hope will merit it.

As in deducing down the proportionate Value of Gold to Silver to the present Times, the respective Variations, Reasons thereof, and attendant Consequences, a just Light may be spread over the Body of this Work, so may it not be impertinent to observe, that an Insight may be likewise given into the Affairs of the World, which Historians have rarely thought worthy Notice, that is, from  
hence

hence to shew in what State of Wealth or Indigence, flourishing or decaying, this or that Country might be in the respective Periods traced, and whether, under the Care or Dictature of wise or weak Governors; but more especially as it regards this Nation, measured comparatively with others, which may the Basis, in proper Time and Place, of more extended Reflections.

A learned and judicious Author of the last Century, much Mr. VAUGHAN quoted hereafter, has well observed, "That *Use* and *Delight*, or the  
 " Opinion we entertain of them, are the true Causes why most  
 " Things have an affixed Price or Value, but the Proportion of that  
 " Price or Value, is chiefly governed by Scarcity or Abundance;  
 " therefore, that the proportionate Value between Gold and Silver,  
 " must necessarily differ in several Times and Places, according to  
 " the Plenty or Rarity of the respective Metals."

There is much Variety amongst Authors, what Proportion Gold and Silver held to one another in the flourishing Ages of the *Jewish* State; not from the Difference of Time, but Variety of Interpretations. BODIN alledges the same Place to prove the Proportion 25 to 1, which some quote for 45 to 1, and others only 10 to 1, which last seems the more probable, as all Historians agree in the Super-plenty of Gold.

There is a Passage in HERODOTUS, by which it appears, that 13 Talents of Silver were valued at one of Gold in the Revenues of DARIUS; and there is a received Opinion, that in the Prosperity of the *Græcian* Common-wealths, the Proportion was 12 to 1.

PLINY reports, without mentioning any certain Time, that anciently the *Romans* did value a *Scruple* of Gold at 20 *Sestertii* of Silver, which, when the *Sestertii* was at the greatest Weight, was 20 to 1, when at the least 15 to 1.

But there is a clear Passage in the Eighth Book of that Decade of LIVY, respecting an Agreement between the *Romans* and *Ætolians*, that they might pay ten Talents of Silver instead of one of Gold; and where it is said that CÆSAR, at his coming out of *Gaul*, brought such a Quantity of Gold, that the Proportion abated to  $7\frac{1}{2}$  to 1, is not credible, if the Proportion of 20 to 1 were true.

In *France*, the Proportion down to the Time of King JOHN, was 11 to 1; and by an Edict of 1614, about 13 to 1.

In *Germany* the ancient Proportion was 11 to 1; but in the Year 1610, 13 to 1.

In the *United Provinces* 1662, by a Placart it appears to have been nearest  $12\frac{2}{3}$  to 1; and the Proportion in *Spain* for some Time back about 12 to 1.

As to the Proportion of Gold to Silver, during the Times of our *Saxon* Ancestors, appears not any where, that I can discover, nor any Value or Account by gold Coin at all; but as there was every where Gold in Use at that Time, and as I find the Silver under the same Regulation in *France* and *Germany* as in *England*; under CHARLEMAGNE as under the SAXON HEPTARCHY, and founded on the best regulated *Roman* Measure under JUSTINIAN, so I conclude the Proportion of the two Metals to have been the same, or nearly alike, as at this Time all over *Europe*, though differing as now in the Division.

By the *Emperor* JUSTINIAN's Regulation, the Pound of Silver was divided into sixty Parts;

By that of CHARLEMAGNE into twenty;

And

And the *Saxon* Pound was exactly the like, consisting of xx Shillings, each of them xii Penny-weights, xx whereof made an Ounce, and xii Ounces or xii Times 1 s. 8 d. the Pound.

They had likewise other Divisions which our Authorities are not so well agreed about, though they all amount to the same Thing, when calculated back into the fundamental Proportion; so it is doubted whether they had not the Pound divided into 12 and into 15 Ounces, and into 20, 48, and LX Shillings. By ETHELRED's Laws 15 *Oræ* was a Pound; and Sir H. SPELMAN defines the *Oræ* by *Uncia*, an Ounce; and *Oræ* is, by the same Author, said to be a Piece of Money Value 16 d. and it is certain that 15 by 16 produces the same Number of Pence, as 12 by 20, 48 by 5, or LX by 4; and are either of them the Sum of 240 Pence, or the same Value of a Pound of Silver.

Thus, after a strict Enquiry into the Value of the *Libra* ANGLO-SAXONICA, and consulting all that's material on the Subject, the Difference of Opinions seem only to have arisen from the Variety of the Divisions, each alike capable of being arithmetically resolved into the first given Quantity of the Pound Troy; and stand here in Order:

$$1. \left\{ \begin{array}{l} \text{An Ounce} \text{ — } xx \text{ Penny-weight} \\ \text{A Pound} \text{ — } xii \text{ Ounces} \end{array} \right\} \begin{array}{l} \text{—} \\ \hline 240 \\ \hline \end{array} \left. \vphantom{\begin{array}{l} \text{An Ounce} \\ \text{A Pound} \end{array}} \right\} 240 \text{ Penny-weight Troy.}$$

$$2. \left\{ \begin{array}{l} \text{An Ounce} \text{ — } xvi \text{ Penny-weight} \\ \text{A Pound} \text{ — } xv \text{ Ounces} \end{array} \right\} \begin{array}{l} \text{—} \\ \hline 240 \\ \hline \end{array} \left. \vphantom{\begin{array}{l} \text{An Ounce} \\ \text{A Pound} \end{array}} \right\} 240 \text{ ditto.}$$

$$3. \left\{ \begin{array}{l} \text{A Shilling} \text{ --- } \text{xii Penny-weight} \\ \text{A Pound} \text{ --- } \text{xx Shillings} \text{ ---} \end{array} \right\} 240 \text{ ditto.}$$


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$$240$$

$$4. \left\{ \begin{array}{l} \text{A Shilling} \text{ --- } \text{v Penny-weight} \\ \text{A Pound} \text{ --- } \text{xlvi Shillings} \text{ ---} \end{array} \right\} 240 \text{ ditto.}$$


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$$240$$

$$5. \left\{ \begin{array}{l} \text{A Shilling} \text{ --- } \text{iv Penny-weight} \\ \text{A Pound} \text{ --- } \text{lx Shillings} \text{ ---} \end{array} \right\} 240 \text{ ditto.}$$


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$$240$$

By this and some other Circumstances, not pertinent to the present Purpose, it should seem that in those early Days, our Ancestors understood honest Arithmetic as well as their Posterity; as we see all their Denominations calculated into whole Numbers, and all the whole Numbers they can be calculated into.

From the Coming in of WILLIAM the *Norman*, to the Time of EDWARD I. we find but a very obscure Account of the State of our Coin; nor until the Reign of EDWARD III. have we any clear Authority for the Value set upon Gold, or of its Proportion to Silver, and still less of the Proportion of both to other Commodities, altho' thereupon much depends as to the giving of us a fair Insight into the State and Condition of those Times, as to Trade, Wealth, Plenty, &c. though they seem to be Matters that we most want to know, in Order to a thorough Mastery of our own History; for which Reason I have given the following Table, which, amongst other Things, will evince, that the ancient and modern Proportion of Gold to Silver was not very different in the Reigns of EDWARD III. and of

GEORGE II. But why so is Matter of further Enquiry, as it is also in respect to the Price of Labour, &c. which perhaps may appear in a new Light, and altogether contribute essentially to open the Reader's Way to the more ready understanding of the Use and Excellence of the following Performance, wherein the Doctrine of Bullion, Coins and Exchanges, the Nature, Genius, and Operation of Trade are deduced from the Fountain-head, with great Skill and Accuracy.

I have only to observe further, that for the easier Introduction of those into this Branch of Knowledge, who may be at present Strangers thereto, that the Gold is always calculated by Carrats and Grains, 4 of which Grains make the Carrat, and 24 Carrats the Pound Troy of 12 Ounces.

The Silver is calculated by Ounces, and Penny-weights, 20 of which Penny-weights make the Ounce, and 12 such Ounces the Pound Troy, as above; and of other Divisions Notice will be taken in due Place. And note, that the Standard in the Table is the Quantity of Gold or Silver fine, fixed to be in it by Law.

TABLES of GOLD and SILVER, composed from the Authority of Mr. LOWNDES, who inspected the original Indentures; and from Bishop FLEETWOOD.

GOLD TABLE.						SILVER TABLE.								
Reigns.	Specie.	Division.		Tale.			Stand. fine.	Specie.	Tale.		Stand. fine.	Proportion.		
		s.	d.	l.	s.	d.			car. gr.	d.			s.	d.
28 E. I.														
18 E. III.	Florens	VI	—	15	0	0	23 3½			XX	III	11 2	100 83	
Eodem ANN	Nobles	VI	VIII	13	3	4	Ditto							
20	Ditto	Ditto		14	0	0	Ditto			XXII	VI	Ditto		
27	Ditto	Ditto		15	0	0	Ditto	IV	14	I	XXV	—	Ditto	
30, 37, 46 } 18 R. II. } 3 H. IV. }	Ditto	Ditto		Ditto			Ditto	Ditto		Ditto		Ditto		
9 H. V.	Ditto	Ditto		16	13	4	Ditto	IV	II	I	XXX	—	Ditto	
1 H. VI.	Royals	X	—	22	10	0	Ditto	½ ¼						
	Angels	VI	VIII	16	13	4	Ditto	Ditto			XXXVII	VI	Ditto	
4	Nobles	VI	VIII	16	13	4	Ditto	Ditto			XXX	—	Ditto	
24	Ditto	Ditto		Ditto			Ditto	Ditto			Ditto		Ditto	
39	Angels	VI	VIII	22	10	0	Ditto	Ditto			XXXVII	VI	Ditto	11
4 E. IV.				20	16	8	Ditto	Ditto			Ditto		Ditto	
5	Nobles	X	—											
	Angels	VI	VIII	22	10	0	Ditto	Ditto			Ditto		Ditto	
8, 11, 16 } 22, 1 R. } III. } 9 H. VII. }														
1 H. VIII.	Sovereigns	XXII	VI											
	Royals	XI	III											
	Angels	VII	VI											
	Nobles	VI	VIII	27	0	0	Ditto	Ditto			XXXV	—	Ditto	11 17
	{ Crowns	V	—	Gold. Stand. lowered.										
	{ ½ ditto	II	VI	25	2	6	22 0	Ditto					Ditto	
34	Sovereigns	XX	—	28	16	0	23 0	XII	IV	II	I	XLVIII	—	10 0
36	Angels	VIII	—	30	0	0	22 0	½ ¼				Ditto		6 0
37	Crowns	V	—	30	0	0	20 0	Ditto				Ditto		4 0
1 E. VI.	Ditto	Ditto		Ditto			Ditto	Ditto				Ditto		Dit.
3	Ditto	Ditto		34	0	0	22 0	XII	—			LXXII	—	6 0
4	Sovereigns	XXIV	—	28	16	0	23 3½							Dit.
	Angels	VIII	—											
5								Ditto				Ditto		3 0
6 E. VI.	Sovereigns	XXX	—	36	0	0	23 3½	s. s. d.						
	Angels	X	—					v 2 6				LX	—	11 1
								d XII, VI, III						
	Sovereigns	XX	—	33	0	0	22 0	i ½ ¼ d.						
	Crowns	V	—											

A State of Confusion.

GOLD TABLE.

SILVER TABLE.

Reigns.	Specie.	Division.	Tale.	Stand. fine.	Specie.	Tale.	Stand. fine.	Proportion.
		s. d.	l. s. d.	car. gr.	d.	s. d. oz. dw.	100	
1 MARY			36 0 0	23 3 $\frac{1}{2}$		LX — 11 0		
2 ELIZ.	Sovereigns	xxx				Old Standard.		
	Royals	xv	36 0 0	23 3 $\frac{1}{2}$	VI IV III			
	Angels	x			II $\frac{1}{2}$ I $\frac{1}{4}$			
	Sovereigns	xx				LX — 11 2	11 16	
	Crowns	v	33 0 0	22 0				
19	Angels	x	36 0 0	23 3 $\frac{1}{2}$	Ditto	LX — 11 2		
26	Nobles	xv	36 0 0	23 3 $\frac{1}{2}$				
35	Sovereigns	xx						
	Crowns	v	33 0 0	22 0				
43	Angels	x	36 10 0	23 3 $\frac{1}{2}$	s. s. d. d. v 2 6 XII d. VI II I $\frac{1}{2}$	LXII — 11 2		
	Sovereigns	xx						
	Crowns	v	33 10 0	22 0				
2 JAC. I.	Unites	xx						
	Double Crow.	x			Ditto	Ditto	11 2	
	Britain Crow.	v	37 4 0	22 0				
	Thistle Crow.	iv						
3	Royals	xxx						
	Angels	x	40 10 0	23 3 $\frac{1}{2}$				
10	Ditto	Ditto	44 0 0	Dit.				
	Unites	xxii						
	Double Cr. &c.	xi	40 18 4	22 0				
2 CAR. I.	Rose Royals	xxx			s. s. d. d. v 2 6 XII d. VI II I $\frac{1}{2}$	LXII — 11 2		
	Spur Royals	xv	44 10 0	23 3 $\frac{1}{2}$				
	Angels	x						
	Unites	xx						
	Double Crow.	x	40 0 0	22 0				
	British Crow.	v						
12 CA. II.	The same of both Kinds and Value Gold and Silver.							
22	Guineas	xx			Ditto	LXII — 11 2	14 54	
	$\frac{1}{2}$ Guineas	x	44 10 0	22 0				
	2 Guineas	xl						
	5 Guineas	c						
1 JAC. II.	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	

I do not find any Alteration in the Standard of the Gold or Silver down to the present Times, 22 Carrats fine and 2 Alloy is the Pound of Gold, and 11 oz. 2 dw. fine, and 18 dw. Alloy, the Standard Pound of Silver; and the Division of the Pound Gold continues the same; that is to say, into 44 Guineas  $\frac{1}{2}$ , and the Silver into the usual Number of Crowns, &c. But the Guineas have varied in the nominal Value several Times, rising up to xxx Shillings, and declining to xxi, the present current Value; but never have been reduced again to their intended Level of xx Shilling; nor indeed ought, when compared with the *Portugal* Pieces of 3*l.* 12*s.* or 1*l.* 16*s.* it appears to be better worth xxi Shillings.

	<i>l.</i>	<i>s.</i>		to the lb. Troy.	
<i>Portugal</i>	3	12	13	46	16 0
<i>English</i> Guineas	1	1	44 $\frac{1}{2}$	46	14 6
					0 1 6
And the <i>Portugal</i> Standard worfe $\frac{1}{4}$ Grain					0 2 6
Total worfe lb. Troy by Standard and Tale					0 4 0

This, with the Difference in Point of Exactness in coining, wherein the *Portugal* is much more defective than the *English* Coin, may be very good Reasons for their being refused in Payments in any of the Receipts of the public Revenue, but answer very well the Purpose of those who benefit by the Irregularity in trading with the heavier, and passing off the lighter by Tale, and which, if they can turn into Guineas or heavy Silver, make another Gain.

However, for the Satisfaction of the Reader, and that all may be known on this Subject that is requisite to the perfect Mastery of the Doctrine of Bullion and Coins, and how our Standard is proportioned to that of other Countries, and thence what the true Par of Exchange is between us, I refer to the Tables of Sir ISAAC NEWTON, and the Explanations thereupon, and his Representation afterwards to the Lords of the Treasury upon our Coin, quoted in the following Treatise, and annexed to the same, with some Remarks, and an Abstract of the *Indenture* made with the *Master* of the MINT.

As Coin is made out of Bullion, and as either is more scarce or plenty, so are they valued in Proportion to other Commodities, and are barterable for them. From hence, and from the intrinsic Worth of Coin or Bullion, that is to say, their Freeness from Mixture or Alloy, or in other Words, their Purity or Fineness is formed that Exactitude in adjusting Debts and Credits between Nation and Nation, Merchant and Merchant, or otherwise in Dealings whether at Home or Abroad, in greater or in lesser Matters. At Home a little Difference

rence in the intrinsic Value is not generally regarded ; for so long as any Coins will pass currently from Hand to Hand, as the *Portugal* Gold does here in small Matters, the Difference is not respected ; but when Payments run high, and the Debt is well assured, then it is that Men begin to inspect and calculate ; and as in Commerce between Nations the Accounts run high, so it naturally follows that those who are to receive Bullion or Coin in Return for other Commodities, enter as critically into the intrinsic Value, as those who are to pay, into the Value of other Commodities. Hence springs *foreign* EXCHANGES, and hence a curious Enquiry into the intrinsic Value of the Coins of different Countries. This shews at once, the Use of the preceding Table, and still more of one Branch of the following Treatise.

Whatever farther is to be said on this Subject, all centers at last in *intrinsic Value* ; for although there may be a Difference at Times and Places in the comparative Value of Gold and Silver to each other, and to other Commodities, in the incidental Expence of Returns, or in the Largeness or Smallness of the Demand ; yet still the *intrinsic Value* governs all, so in that are only to rest it to calculate thereby, and leave all else to casual Considerations and the Judgment of the Parties concerned, who will, so long as Plenty or Scarcity of Gold or Silver, or as larger or smaller Demands occur, suit the Market thereto, and rise and fall, or to the natural *Par pro pari*, level EXCHANGES.

There is another Matter which most of the Writers on Bullion and Coins have entered into with great Warmth and Spirit, and which our Author not having constituted as a peculiar Branch of his Work, as not seeming immediately material, I shall attempt here to consider in perhaps a more informed Light, than has been generally the Case with those who, without tracing it through all its various Appearances, have been very positive in affirming or denying, or which is much the same, affirming oppositely.

The

The true Question, however diversify'd by Words, is, whether the having a greater Plenty of Gold or Silver, is the true and only Cause of the supposed Difference of the Price or Value of Provisions, Necessaries, and Labour? Or, in other Words, if Gold or Silver, or both, have by their Plenty lessened their former Value or Estimation, whether Labour, &c. have been proportionably adjusted thereto?

A right Solution of which Questions, instructs us in the Knowledge of the Causes, which affect our Manufactures at home, and consequently our Trade abroad, as the greater or lesser Balance depends on the Cheapness or Dearness of Labour.

If either Gold or Silver has increased, such Increase seems to have been mutual, if that may be ascertained by the Proportion they have appeared by tracing them down to have bore to one another. But if it any where appears, that more Gold in Proportion was used formerly than Silver, and more Silver now than Gold in wrought Works of any Kind, out of the Course of Currency, then it will follow, that their Proportion in Currency will not evince their continual proportional Equality. And as from all we can gather from History in very old Times, Gold seems to have been more apply'd to wrought Works than Silver; and as in the present, it is evident that more Silver is so apply'd than Gold: And as in old Times the Proportion of Silver to Gold in Currency was nearest 12 to 1, and now nearest 15 to 1, it seems evident that Gold was more plentiful formerly than Silver, and Silver now than Gold.

By ancient Times in this Place I would be understood to mean, the flourishing Ages of the *Jewish* State, and of the *Assyrian* Empire. As to the Times, only five hundred Years back, or something less, we find the Proportion in Currency to differ but little; but as the Use of wrought Plate, &c. has of late greatly increased, it puts it quite out of Doubt, that Gold in Proportion was then more plenty  
I than

than Silver, and now Silver more Plenty than Gold, without Relation to the great Quantity, not only this Nation, but others export to the *East-Indies*.

As to the general Plenty of both, and how that has operated in respect to the Price of Labour, &c. is a Matter of further Consideration; and in this respect shall confine myself to *England* only.

Among many Writers on this Subject, the learned Author of the *Chronicon PRETIOSUM*, is not to be the least regarded, though that Book was wrote for a particular Purpose.

That learned Author has deduced down in Divisions the Price of *Provisions*, the Value of one Kind of *Church Livings*, and the common Price of *Labour*; the two former from various Authors of Credit, the latter from our Statute Books, and certain casual Occurrences.

And here it may be proper to observe, that an Ounce of Silver is, and ever was, equal to an Ounce of Silver; and therefore, whatever more an Ounce of Silver would purchase, or pay for formerly, or now, is the true Difference. To go back then to the Head of the preceding Money-table, it appears, and we are both agreed in it, that 28 EDW. I. Silver was at 1 s. 8  $\frac{1}{4}$  d. an Ounce; Silver now at 5 s. 2 d. therefore if 1 s. 8  $\frac{1}{4}$  d. purchased a *Sheep* then, or paid the *Labourer* a Week's Wages, and 5 s. 2 d. does the same now, they being only of two different Denominations, and equally an Ounce of Silver, then were the *Prices* equal.

The Price of Provisions, as the learned Author admits, is a very uncertain Rule to judge by, as they not only alter on various Occasions at the same Market; but very materially at all Times in different Markets, as to Flesh, Poultry, and Fish; but as to Corn, the Price is nearly similar in all Markets.

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To make this Part of the Argument as brief as possible, I have here noted tablewise, the Price of such Things as are the most absolutely necessary for the Support of human Life, from the Author's own stating, and of what was actually purchased for the Prior of St. *Augustin's, Canterbury* 1309, and against them have set the Prices as they are now equal to, nearly as 1 s. 8  $\frac{1}{4}$  d. is to 5 s. 2 d. or Two-thirds Difference; by which what Variance there is will appear evident.

An Oz. of Silver at 1 s. 8  $\frac{1}{4}$  d. = An Oz. of Silver at 5 s. 2 d.

		l.	s.	d.	=	l.	s.	d.
1309	Wheat <i>per</i> Quarter	0	7	2	=	1	1	6
	Malt ditto — —	0	6	0	=	0	18	0
	Oats ditto — —	0	4	0	=	0	12	0
	An Ox Carcass —	0	18	0	=	2	14	0
	Hog ditto — —	0	3	2 $\frac{1}{4}$	=	0	9	6 $\frac{3}{4}$
	Muttons ditto —	0	3	0	=	0	9	0
	A Goose — —	0	0	3 $\frac{1}{2}$	=	0	0	10 $\frac{1}{2}$
	A Capon — —	0	0	3	=	0	0	9
	A Pullet — —	0	0	1 $\frac{1}{2}$	=	0	0	4 $\frac{1}{2}$
	Eggs nine — —	0	0	1	=	0	0	3

How near these Prices approach to our distant Markets, is more readily observable, than that when some Circumstances are considered, they may be in Proportion much above them, as a Quarter of Wheat at 1 l. 1 s. 6 d. without a Land-tax, and Malt at 18 s. with both a Land and Malt-tax on it, and Oats at 12 s. with a Land-tax, and all three under the Load of various other Taxes, not known in those Days, will altogether sufficiently evince, that a Super-plenty of Money has not been the sole Cause of the Difference; nor is it very significant without, as a Quarter of Malt at 18 s. is not an uncommon Price now; neither is Oats at 12 s. an Ox at 2 l. 14 s. may

may be thought cheap, by those who imagine it is intended such Oxen as are brought to *Smithfield-Market*; and the same may be said of Hogs and Sheep; nor is a Goose at  $10 \frac{1}{2} d.$  such an extraordinary Purchase at a Barn-door, no more than is a Pullet for  $4 \frac{1}{2} d.$  or nine Eggs for Three-pence.

But this is not much to the Purpose of the main Argument, as these are all partial or chance Prices: Nor was the Produce of the Land in those Days so well proportioned, as to bear even or regular Prices, especially between Corn and Cattle, as it is found on due Examination, that Wheat was often at an Ounce of Gold the Quarter, and other Grain in Proportion; and, upon an Average through the whole five hundred Years dearer than now.

On the studying of this with more than common Attention, I find the Value of a Day's Labour to be  $3 d.$  nearly the seventh Part of an Ounce of Silver then, and so equal to  $9 d.$  now; that the Statutes directed less, I am sensible: But they never did, nor never will, or can operate to any Purpose in such Cases; not only for Reasons that common Sense will tell any Man, but what is likewise evinced by common Experience; the Reason is, because such Laws are not equal, founded on a false Supposition, that every Man is equally strong, willing and skilful, and therefore the Statutes only serve as Hints to inform us something near the Matter.

It is besides with Labourers as with Commodities; the Price is governed by Plenty or Scarcity; and herein consists the Marrow of that Maxim, *that Numbers of People are the Wealth of a Nation*; as where they are plenty, they must work cheap, and so Manufactures are encouraged for a foreign Market, and their Returns is the Wealth of a Nation, which Numbers thus procure.

Take this as a brief Illustration; if Plenty of Money made Labour dear, how happens it, that in *New-England*, where Money

is scarce, Labour is dear: And again, in *Jamaica*, where Money is plenty, Labour is dear; the same in *Spain*, &c.

A *Maxim* must hold true in every Part, or it's no *Maxim*; and this of the Plenty of Money making Labour dear, is hardly true in any Part; for in the different Situation of *New-England*, *Jamaica*, and *Spain*, we see the same Effect; but neither relative to the Plenty of Money, but all to the Scarcity of Labourers. However, if we look a little further back, Plenty of Money may in Time cause a Scarcity of Labourers, and so Dearness of Labour; but this is merely casual.

But then again, it should in another Light be the Cause of Cheapness in Necessaries, as it may be the Means of Improvement of Lands, &c. and so by rising the Quantity, lessen the Value.

And we see daily, that the Price of Grain is not ruled by the Plenty or Scarcity of Gold or Silver, but by its own Super-abundance or Defect, where we raise more than we can vent, or where we could vent more than we raise; so in Labourers, where they are scarce, they command their Wages; where Plenty, the Wages command them; that is to say, they will work for less Gold and Silver in one Case than in the other. Hence it is evident, that Gold and Silver is as much balanced by the Plenty or Scarcity of other Things, as them by Gold and Silver; and upon that Balance depends the Difference of Prices.

I am apprehensive, that the learned Author above quoted, plainly perceived this; for he says, *Chap. VI.* "That v *l.* in *HEN. VIth's*  
 "Time, contained 40 Ounces of Silver, now only  $19 \frac{1}{3}$ ; and there-  
 "fore that v *l.* was of somewhat better Value than x *l.* now-a-days  
 "is:" But then says again, for Reasons he was best acquainted  
 with, "That if for twenty Years together the Price of Wheat  
 "were vi s. viii d. the Quarter; and from 1686 to 1706 at 40 s. the  
 Quarter,

“ Quarter, it is plain  $v$   $l$ . in HEN. VIth's Time would have purchased fifteen Quarters of Wheat, for which the last twenty Years must have been paid  $xxx$   $l$ . therefore that  $xxx$   $l$ . now would be no more than an Equivalent to  $v$   $l$ . in the Reign of HEN. VI.” But suppose  $v$   $l$ . now is 20 Ounces of Silver, 30 Times 20 is but 600, and 5 Times 40 is 200, or  $\frac{1}{3}$  the Quantity, and proves beyond Dispute, that the Equivalent is only as 5 is to 15, not as  $v$  is to  $xxx$ .

This is a Point which I look upon as of the last Importance to my Country, to investigate clearly, what is the true Cause of the Dearness of Labour, &c. it cannot be owing alone to Plenty of Money, for the Reasons before urged; and because that where a Country is full stocked with Inhabitants, whether Money be plenty or not, the Price of Labour will always be in the Power of the Employer; and where that is the Case, Manufactures will be carried on cheap, as in *Flanders*; and the sure Way to carry on a flourishing Trade, is certainly to manufacture cheap; and as this is only to be attained by an Abundance of Labourers, and we do not perceive the Want of them, through their earning too much Money, and so setting up for themselves, nor from Want of a healthy Climate, nor from Numbers going abroad: Nor will our heavy Weight of Taxes fall always so much on Provisions and Necessaries as to make Labour dear, though it may make a material Difference between the present and former Times. For, as has been observed before, if the Markets are full stocked, the Buyer will govern the Price; and if that Price will not pay Rent, the Landlord may be obliged to live upon less, but the Consumer will not be burthened with the Taxes, it must all fall on those who have Property.

So that, as to the Labourer, this is but Part of the Evil, or Necessity of raising the Price of Labour: The worst Part of it then is, that high Taxes drain the Centre of a Country into the Capital, whence perhaps it may not circulate back quick enough to answer

necessary Emergencies ; which causing a Stagnation of Business, sends the Labourers after the Money : And a Country thus thinned, tho' Money be scarce, Labour will be dear, on our former Principles. This is in some Measure remedied by our Number of inland Manufacture Towns, which, by Drawbacks on the Capital, and prudentially keeping their Labourers together, and in Trades they cannot well follow any where else, is a fair Means of having their Business done cheap, and they thrive accordingly ; but out of the Vicinage of these, the Case is very different, Labourers will be scarce, and Labour dear.

Hence I shall beg Leave to make an Inference to the main Purport of the Work before me ; which is, that so much as we want in the Cheapness of Labour, so much shall we be defective in the Balance of Trade abroad ; and although it may be, that *Exchanges* may vary or rise in our Disfavour, whether the Balance be greatly for, or against us in Trade ; yet should we be much better reconciled to that little Deviation from the *Par pro pari*, if Means could be found to render Labour generally cheaper, and by acquiring a large Balance, make little Differences in the *Exchange* appear insignificant.

And as I hope it is now pretty well proved, that Plenty of Money is not the dreadful Spectre that frightens us out of our Trade, by making Labour dear, but the Want of People enough to make it cheap, it will be worthy the Attention of the Great and the Wise, what is the most apt and proper Way of stocking the Nation with sober industrious People, applicable to such Employments as are now evidently most in Want of Labourers, and in which, though I shall not presume to prescribe, I shall beg Leave to deliver a few Hints.

In all Businesses, where the Labourer in three Days can earn Money enough to maintain himself the other three in Idleness, that Business wants more Hands ; and wherever any Part of a Coun-

Country is so scarce of Labourers, as that for Aid in the principal Part of their Business, they are obliged to procure others from a Distance, they likewise want Hands; and in either Case Labour will be dear.

Those who are entertained and educated at the public Expence, the Public have a fair Right to the Disposition of; and it is certainly for the public Good, that they are apprenticed to such Employments as are most in Want of Labourers.

The Children of very poor or dishonest People, should be taken care of by the public in Time, lest instead of serving, they come to hurt the Public, either through Distress or bad Education, if it can be done without any Violence to the natural Right of the Parent, as it is better to make Men good, than to hang those which are bad.

Marriages should be encouraged in such a Manner, as that a Labourer may not be the worse for having many Children.

A little Property in waste Lands will encourage Procreation; and as such Place becomes over-stocked, the Surplus will serve in other Places. Historians say, that out of a few Families rose the *Saracen* EMPIRE. It is more than possible, that a hundred Families well placed, and on suitable Terms, might re-stock the whole Nation with Husbandmen.

After all, so long as the natural Rights of Mankind are duly considered in a free State, so long will they be at their own Disposition, or of their Parents or Guardians; and so long will some Employments, not much to the Interest of the Community, be overstocked, and others of more Importance to its Welfare be wanting of Assistance: In which Particulars the Remedy resting rather in the Skill than Power of Government, or in the good Management of those particularly

cularly concerned, we must wave farther intermeddling herein, and conclude this Branch of the Introduction, by only observing, that if Money be ever so plenty, or scarce, the Price of Labour will always be ruled by the Quantity of Labourers, the Price of Goods by the Quantity at Market, and the Balance of Trade by the Quantity and Cheapness of Commodities.

As to what is said in the *Chronicon PRETIOSUM*, about the *Stipends* of Priests, serving *Cures*, and *Vicarages*, or *Masses*, it only shews, that those who had the great Incomes, parted with as little as possible to inferior Priests, and makes nothing to the main Argument, as they could not live upon it, and went out robbing and thieving, while the Superior amassed immense Wealth; as it appears that in Abbacies and Bishopricks, they could afford to expend Sums that would seem now *immense* to an Archbishop of *Canterbury*; could build as expensive a Church as *St. Paul's*, and settle great Estates on Colleges and Schools on one Man's single Bottom: In a Word, could do what Kings could not do. And yet we find that in 1316, EDW. II. gives to THEOPHANIA, because she had been *Nurse* to his Queen ISABELLA, a yearly Estate of 500 *l.* for ever, a Gift not equalled in this Age, where the Reason is similar. Besides that, 500 *l.* then contained as much Silver as 1500 *l.* now, as I hope is obviously proved before. And as to the Priests, it is the same as with the Labourers, they might be something cheaper than at present, because more plentiful.

That we have more Manufactures, and more Trade, is not doubted; but in order to circulate that, we are necessarily obliged to expend in Part on the one hand, what we gain on the other, and what the Difference of that is, there is the Sum total of our Substance.

Our Gain formerly was produced by the Sale of such of our staple Commodities, as other Nations must take at our Price, particularly  
Tin,

Tin, Corn, and Wool; and as those who purchased them made their Markets other where, the Returns to us was principally in *Coin or Bullion*; and as we did not for some Time deal much farther, so foreign Wares purchased by us was inconsiderable: and therefore the Majority of our Returns a real Balance. But whether that Balance equalled the present, is difficult to be adjusted.

To judge of this by the Operation and Effects, is only to consider in what Course the Cash ran in former Times and now. Formerly it was in the Hands of the Priests and of the Nobility; now chiefly in the Hands of the Trader, and in the public Treasury.

The Application of it formerly was in building and endowing Churches, Monasteries, &c. and in erecting of noble Seats; what was then chiefly circulated in Buildings, and amongst Artificers and Labourers in that Way, now circulates maritime-wise and in Manufactures.

The Nobility could then do great Things, live higher, and keep public Hospitality, without injuring their Estates, because they were much larger than any are at present; and for the same Reason could the Priests do the like; nor is any Man now able to build as was done formerly, it being found difficult for the whole Nation to spare any Thing significant for great Purposes. And even to come between the Nobility and Clergy, we find more good Gentlemens Seats built than at present, without Injury to their Fortunes, while most of our modern Builders sink their Estates in their Houses, and generally perform but meanly neither.

On the other Side, there is more Cash in Bank and in Bankers Hands, than probably there might be Cash formerly in *London*; but there is likewise some Part of it owing abroad, and not *English* Property, independent of what we pay Interest for; and such Money and such Interest must be thrown into the Scale to balance fairly

the Difference of our Stock of Cash, formerly and at present; as must also the Difference between paying of Subsidies abroad, and receiving an Income from conquered Countries; and thus allowing a greater Flow of Money, there may not be a larger subsisting Sum.

This brings me to the Conclusion of my Argument, which was to shew, that the Increase of Money is not the only Cause of the Difference of the Price or Value of Provisions, Necessaries, and Labour, which confirms what is set forth in the following Treatise, That Money in general makes out but a small Part of that wherein consists the Wealth of any Nation, which comprehends Thousands of Things for the Use of the Community; and whereof, defective as we are in *England*, Foreigners, as well as *Englishmen*, must allow, that as our Laws, Constitution and Government excel all others, we therefore find in Proportion here more Property and Plenty than any where else.

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T H E

UNIVERSAL MERCHANT.

S E C T I O N I.

(1) **T**H E *Wealth* of a Nation, though generally envied and dreaded by neighbouring States, should rather be Cause of universal Satisfaction, when it is considered, that as a Superfluity naturally spreads the soonest to the nearest of them; so by the one, the Strength or Power which Wealth gives, flows in Proportion to the other.

S E C T. II.

It is obvious, that if our Neighbours are possessed of a greater Stock of Commodities, for either Advantage or Pleasure than are requisite for themselves, and we either want or desire them, they are to be obtained at less Charge than if we traded for them to more distant Countries.

And if they have too many, and we too few People, while we are in Friendship, they will dispose themselves amongst us, and thereby contribute to improve our Wealth and Power.

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(1) By *Wealth* here is not specifically understood Cash or Bullion, Gold or Silver, which are only the common Medium of Trade, but a Pre-eminence of *Industry*, *Manufactures*, and *Commerce*, which are truly the *Wealth* of a State.

B

S E C T.

## S E C T. III.

If both our own Country, and neighbour Nations, are thin of Inhabitants, we should use all possible Means to supply ourselves from more distant Parts.

## S E C T. IV.

People readily go to Countries where they are sure to enjoy Liberty, and reap the Benefit of their Labours, where Justice reigns, and where the Situation of Towns, the Fertility of Lands, and the general happy State of Things are calculated to produce superior Advantages to what they could possibly enjoy in the Places of their Nativity.

## S E C T. V.

(2) *Ministers* at the Helm of Affairs, who observe it to be Want of good Policy, and the not giving due Encouragement, that the Country is thin of Inhabitants, and Lands lie uncultivated, will ever use their best Endeavours to engage Foreigners, by granting them ample Privileges, and even free Cities for Trade.

## S E C T. VI.

When once People have made themselves in their Districts so numerous and powerful, that they are able to defend the Privileges granted them, they will not easily suffer themselves to be deprived again.

It is, perhaps, from such Motives, that the free Cities in *Germany* became independent; but, if it is rightly considered, that altho'

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(2) It is however certain, that no Country, naturally fertile, and lying convenient for Trade, ever wants Inhabitants, unless the Generality are in such a Situation, as that they do not chuse to marry and procreate, or that they are injudiciously permitted to transplant themselves into foreign Colonies, or both.

they

they are independent, they are of more Utility to the State than if they had never been free; because, as they increase in People and Wealth, the Princes Lands that surround them, increase also, and are therefore evidently the Cause of the improved Value of such Princes Lands, that were before of little Significance.

#### S E C T. VII.

Suppose on the one Side of the River *Elbe* is a great, rich, free City, surrounded by the Lands of a powerful Prince, who can, at Pleasure, conquer the same, he might, for the present, reap some Benefit therefrom; but the Inhabitants of the circumjacent Country would soon feel the evil Effects, and consequently quit it. And then suppose a Prince on the other Side of the *Elbe*, made such Offers as would draw them over to settle there, would not he who drove them away, have more to fear from the additional Wealth of his Neighbour-prince, than from the free independent City?

#### S E C T. VIII.

While a Prince, from the Independence of such a free City, has nothing to fear, he should not impede the Way, by which Wealth and People are led into it, but rather consider it as a Place privileged by himself, and his own.

#### S E C T. IX.

By granting to a neighbouring Place yet greater Privileges, and by Exemption from Taxes, you may soon cause People to remove from one Place to another; but while they are not from foreign, or distant Countries, the Number to live on the native Produce in both Places, is equally the same, so will not increase its Value. On the contrary, by dividing the City's Interest from your own, and setting People to work against them, it may be a Reason for the most wealthy to withdraw, and the Course of Trade along with them.

#### S E C T.

## S E C T. X.

But great trading Cities neither ought to make themselves uneasy, by any small Settings-up, or Workings against them in their Neighbourhood, it may be rather a Benefit to them; because, as foreign Artificers may not be permitted to work in the City, they may be of equal Service by working without the City.

## S E C T. XI.

So it is for *London*, where, within the Precincts of the City, Freemen only are permitted to do certain Sorts of Work; but all round, as in *Westminster*, *Burrough of Southwark*, *Tower-Hamlets*, &c. all People are at Liberty to do what kind of Work they please.

## S E C T. XII.

If in a City, for Example, the Brewing Business was granted, or confined to one Body of Men, who either did not understand, or would not brew good Beer, and yet the Inhabitants chose to drink of the best, would it not be better to encourage the Setting-up of Brew-houses in the Neighbourhood, than to fetch it from a Distance?

## S E C T. XIII.

There is a great Difference in Respect to what may be for the public Benefit of a single City that has not any Land-produce of its own, and of a Kingdom which comprehends a great Number of Cities and Lands together, and to consider what will turn out the best upon the Whole.

By the *first*, all Trade and Affluence of Goods whether produced in the Neighbourhood, or brought from distant Parts, ought to be equally welcome: The City must endeavour, not merely to have the forwarding of the same, but to form a Staple out of as

many of them as they can for buying and selling, and converting as many raw Materials as possible into Manufactures, so that the Value may increase within their Walls. But where various Commodities are produced from our own Lands, your Endeavour ought to be to make the most of it, but in such Manner as that the *Work* of the (3) *City* may not hinder the *Labour* on the *Lands*; and that what you have not on your Lands by Nature, may be acquired by Art, and raised from foreign Seeds, Plants, &c. as, by this Means, the Inhabitants may be more employed in their own, than in foreign Products; nevertheless, that Labour which is bestowed upon Things the most valued, and made Use of for Maintenance, Delight and Defence, is the most beneficial for both, which is subject to Variation, and so Industry and Invention ought every where to be encouraged.

## S E C T. XIV.

Wealth and Plenty in Kingdoms and independant Cities, result from the habituating of the People to Sobriety and Diligence in Business, the prudent and moderate Use of their Profits, and their being instructed and practised in all Kinds of inventive Works. Hence the greater Number there may be, who are able, diligent, and virtuous enough to lay up Part of their Labours in Store, or Money in Lieu of it, the more is such Kingdom or free City in Condition to maintain itself, or to serve or prejudice their Neighbours.

## S E C T. XV.

Being in such good Condition, there is not any Necessity to envy their Neighbour's Prosperity, nor to be jealous of their Improve-

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(3) The Author has hitherto treated the Subject locally, and principally with an Eye to the City of *Hamburgh*, and its Neighbour *Prince* the King of *Denmark*; but the Remark here respects the *Metropolis* of every Kingdom, more particularly *London*; where more Manufactures are carried on, at least to a greater Amount, than in any other, and is thought to draw off too many Hands from *Labour* on the *Lands*.

ments, as they can never fail to find out new Works for the Purpose of Barter.

The more Men invent, the more they use, and the more Opportunity is given to the Increase of Industry; and the more People come from foreign Parts to be employed, the more of the Goods they work up will be to spare for Exportation.

Nor can it injure a virtuous, industrious People, that their Neighbours are equally so, as it will be best for both to have Plenty, as from thence Commerce reciprocally flows, and knits the Bands of Amity.

#### S E C T. XVI.

*War* devours, and *Peace* restores; the Sovereign or State that proposes to enrich their Country, must avoid War with their Neighbours, encourage Virtue and Industry, and *preserve* Peace and good Order at *Home*; and whoever pursues this Rule, will never want Prosperity.

#### S E C T. XVII.

It is a natural Consequence, that every Country, by enjoying Peace, under a wise and orderly Government, will increase in Manufactures; and if there are ever so many, there cannot be any Fear of finding a Consumption for them, because as every Novelty finds a Purchaser, so will every Product of Art find a Vent; as the more we have, the more prodigally are they used.

#### S E C T. XVIII.

All Things are to be had for Money, and Money is made from Bullion. Thus a Country, which possesses Store thereof, can thereby acquire all other Necessaries; yet, the more Money abounds, the less you can buy for it. However, to call a Country rich, it  
must

must enjoy many other Requisites, it being very evident, that Wealth consists essentially in a numerous and industrious People.

#### S E C T. XIX.

By continuing to raise gold and silver Ore, and the Mines not wearing out, the Quantity increases, but the Value decreases, as set against other Commodities, we use not of so durable a Quality.

#### S E C T. XX.

However, Money is the principal Agent in Trade, as it circulates with more Facility, and more readily adjusts the Balance than any other Commodity can; but it is not so abundant in the Places where it is raised, as where there are a Number of People working on barterable Commodities, who dispose of them directly or indirectly to those who possess the Mines; and were the *Powers* possessed of such Mines to manufacture all Necessaries at Home, they could not then have any Use for their Bullion, nor employ it to any Purpose.

#### S E C T. XXI.

The Reason that Money is sought after, is owing to the Value, which its Use in exchange for Necessaries stamps upon it.

There is no Wisdom in hindering the Exportation of Money, no more than of any other manufactured Commodity; but it may be prudent, on certain Occasions, not to suffer its being expended in such Things as are detrimental to the State, and to the Good of Society, as rambling into Countries where our Morals are corrupted, and whereby we may be made an effeminate, idle, vicious People.

## S E C T. XXII.

While the Pursuit after Money creates between Neighbours an Emulation in Excellence of working, and an Increase of Ability, Skill, and Virtue, it is a reciprocal Good, tends to the common Benefit of either State, and the universal Advantage of human Society.

## S E C T. XXIII.

The Value of Money depends essentially on the judicious Application of it, and is either a very valuable, or pernicious Commodity; as used or abused, as it can supply us with People, force Industry, and circulate Trade, it can likewise procure Honour to a State, which is like Credit in Commerce; but its Use is very badly considered, when, by being locked up in our Chests, it is thrown into a Kind of State of Non-entity.

## S E C T. XXIV.

All Commodities necessary to our Use and Recreation, are Money-worth; and whatever we possess more than we want, is so much better than Money by us, as they will produce in the Course of Trade, and in valuable Returns; and therefore it is, that wise Merchants have always a better Store of Goods than of ready Money; for which Reason the Power or Wealth of a Country must not be measured by the Cash we see circulating, but by the Abundance of the People, their Industry, and Stock in Trade of all requisite Commodities, especially in time of War, when by a Decrease of the People, and of Labour, such Commodities become more valuable, and are therefore to be preferred to Money.

S E C T.

## S E C T. XXV.

In great trading Cities, the Wealth is found not so much to consist in Cash as in merchantable Goods; and the oftner Goods change Hands, the less Occasion there is for Money. In some Merchants Warehouses may be found 100,000 *l.* in Effects, but not 1000 *l.* Cash in the Compting-house.

There is most Wealth in a City where you see Streets full of Shops, and Warehouses stored with Goods, and where they are known to be the Property of the Possessor; or if they have them in Commission, they have advanced Cash in part for them. And the surest Signs of the Wealth of a Nation, is the Number, Magnitude, and Appearance of their Manufacture-Towns, and the Quantity of Shipping evidently employed.

People who do not adventure beyond their Strength, and constantly circulate their Money in Trade domestic, or foreign, are always to be preferred by a wise Government, to those who either let their Money lie idle, or depend merely on its Interest out of Trade for their Support.

## S E C T. XXVI.

Men do not generally chuse to let their Money lie idle, where Justice is observed, and they can be secure of receiving it back with Interest, in the same Kind, and of like Value, as what they lent; and since by Money lent out, Labour is improved and Industry encouraged, therefore the Standard of Coins should never be altered to the Prejudice of the Lender.

## S E C T. XXVII.

The Lender ought to receive back in Weight and Fineness, the same Quantity of Gold or Silver, as his contained at the Time he lent it.

The falling  
or raising the  
Coin.

Nations, if they are indebted to foreign Countries, and raise their Coin, certainly gain so much as they pay less than they borrowed, by the Difference of such Augmentation: But, as thereby they lose Credit, the Consequence is commonly against themselves as they must pay more on all future Emergencies, for that Hazard which is run by giving them Credit; and this is what makes the present Difference between GREAT-BRITAIN and FRANCE.

#### S E C T. XXVIII.

A State ought to be careful to always maintain within itself, one certain invariable Coin of its own, whereby the Value of all Goods may be regulated, so as to know what Quantities of Gold and Silver in Weight and Fineness they receive for the same; but it should never hinder the Course of a Neighbour Country's Coin amongst us, for so much as they are the worse, or for such separate Purposes, as it can be made Use of in trading with them to Advantage.

#### S E C T. XXIX.

But there is a Doubt how, when a neighbouring Power makes, from Time to Time, Alteration in Coin, it is possible to hinder its passing for more than its proportionate Value to ours, or how to prevent the Damage falling on ourselves. To come to a clearer Insight of this Matter, let us suppose that we live in a free City, stored with some Coin of our own, according to an Establishment amongst ourselves, and from the neighbouring Powers who surround us, we find ourselves daily burthened with Coin of a worse Alloy, it seems, in such Case, only necessary to publish the intrinsic Value, and at what Rate they will be taken by the Government. In all other Cases, Individuals are to consult their own Interest; *Merchants*, on such Occasions, know very well how to proportion the Price of their Goods to the Value of the Coin, or to give it again in Return for Purchases.

In

In a City so circumstanced, and containing 200,000 Inhabitants, you have daily Opportunity of paying back for each Person for Corn, Butter, &c. two Shillings on an Average (4).

## XXX.

When, by the ordinary Course of Trade which we have to distant Countries, it happens that they become more and more in our Debt, such Increase partly proves the Balance of Trade in our Favour, or, at least, that our People increase more in Wealth than theirs.

(4) In a City so circumstanced, containing 200,000 People, who may each spend a Day two *Hamburgh* Stivers for Corn, Butter, &c. it amounts to 9,125,000 Marks, nearly 608,333  $\frac{1}{3}$  Pounds Sterling, or so much less as that Number is defective; and it is presumed, that the Country People do not take half the Value in Goods. Thus 6000 Marks, *Danish* Currency, at 120 *per Cent.* before the new Coinage, were worth in *Hamburgh*, Bank Money 5000 Marks: Then the King of *Denmark* takes out of *Hamburgh* 5000 Marks, Bank Money, and therewith, at 40 *per Cent.* coins 7000 Marks, which the King pays to his Soldiers, &c. and they to the Farmers, &c. consequently the first Loss falls upon his own People.

But it is farther to be observed, that as soon as the *Hamburgher* was apprised of the Difference of 20 *per Cent.* in Value, he calculated the Equivalent, and found, that for a Debt of 5000 Marks Bank Money, he was to receive 7000 Marks *Danish* Currency: On the other Side, if the Price of Provision did not rise with the Coin, he paid in Equivalent no more than 6000 Marks, and so gains 1000 new Currency, or so much as the Provisions did not rise to in Proportion. Hence it is evident, that if at *Hamburgh*, 8000 House-keepings cost each yearly 500 Marks, *Danish* Currency, the Amount would be 4,000,000; and if the *Danish* Produce ought, in Proportion to their Coin, to have risen 20 *per Cent.* and did not rise above 10 *per Cent.* then it appears that such Produce was purchased at 400,000 Marks less than before. And as it seems not probable, that what the *Danes* purchase annually in *Hamburgh*, could amount to 4,000,000 Marks, and the Half thereof on Credit, it is only in that and the Amount of the Credit, and calculated to receive in better Coin that the *Hamburghers* could once lose.

## S E C T. XXXI.

I speak of Debts arising from the Nature of Trade between Merchants, but not of Debts of State. In *England*, the Debts of State are now more than they have ever been, nearly to the Sum of Eighty Millions; notwithstanding I am of Opinion, that *England*, comparing its national Wealth with other Countries, it has rather increased than diminished. And although it cannot be denied, that forasmuch as Foreigners are become great Creditors of these Debts of State, more Interest must be made good to them; yet if it appears that the private People abroad, are more indebted to the private People here, than such Interest amounts to, the Nation has no prejudicial Draught upon it on Account of such Debt, and that the general *Balance* of TRADE is highly in Favour of ENGLAND.

We shall find, on considering it maturely, that, during the War, a great Balance must have accrued by our naval Superiority, and Prizes taken by the Increase of the Consumption of *English* Manufactures in *Germany*, and by the advanced Price of *East* and *West India* Commodities, and by the great Stock of Goods remaining on Hand at the Conclusion of the Peace, since generally exported.

And, as the Money borrowed is, on Condition, to be re-paid again at Pleasure, or when it can be had cheaper, so it is always in the Breast of the Government to lessen the Burthen; and as hardly One-fourth Part can be deemed foreign Credit, the other Three-fourths makes no Alteration in the national Balance; and it is presumed, that more of the Foreigners Interest is taken in Goods than Money, and that owing to their being Creditors.

It follows, that the more Money a Nation acquires, the less Benefit is reaped from it in Proportion as Interest falls of Course; consequently, if we compute, that from the national Debt, presumed 80,000,000, issues an Interest of 2,400,000 Pounds, and by the lessening of that gradually, from 4 to 3 *per Cent.* in the Interest, the same Taxes continuing, and the Sinking Fund thereby enabled

to pay off from the original Debt annually above 1,000,000, there seems not any Necessity to think of a further Reduction, to diminish the Balance of Foreigners against us, as they computing the Interest received, and what is repaid by the Reduction of the Capital, will be readily induced to give an advanced Price for Stock, and so much as that Premium amounts to, is so much clear Gain, as it lowers and retains of the Interest thereby.

Some modern Politicians have run upon another Notion, and several Persons have thought that the more Funds are erected, the more People are engaged to preserve the present Government. Dr. *Davenant* is of Opinion, that this Policy only holds true, if the Lenders are stronger and more in Number than those concerned in Payments to the Public; however that may be, it is certain, that either the Interest allotted to Foreigners, is not carried out of the Nation, or that the Profit in Trade is immense, to bear without sensibly feeling it a dead Draught of at least 600,000 Pounds a Year.

But it is more than probable, that Foreigners are not concerned in any Thing like One-fourth of the national Debt; the *Dutch*, who are the principal Creditors, however engaged before, not advancing an equal Proportion of the last accumulated Debt of 30,000,000. I have been informed, that most of the Money which the *Dutch* have here, is in Bank, *East-India*, and *South-Sea* Stocks, and that their Interest in them might amount to One-third of the Whole.

Now as Bank Stock amounts to	—	11	Millions,
<i>East-India</i>	—	3	$\frac{1}{3}$
<i>South-Sea</i>	—	—	

One-third thereof does not exceed Millions, and if they have as much more in all the Annuities together, the Amount would only be and as the *Dutch* were late in, and made

made no considerable maritime Profit of the last War, it can hardly be presumed that they came into a proportionate Share of the last 30,000,000 Pounds, though we are sensible, that there were very considerable Sums negotiated there; but as the chief Advantage of the War was made amongst ourselves, it is most likely, that the greatest Part of the Loans were our own. However, as it is not difficult to get at a certain Knowledge of this, so it is a Point easily put out of Dispute; and then it only remains to calculate the Difference of Interest, paid them upon the Whole before, and since, and thereby come nearly at the Truth of their present Draught upon us. For, although some foreign Capitals may stand in *English* Names, it cannot amount to much, and may perhaps be balanced by Foreigners resident here, and *Portugal* Jews who intend to come hither, which is the same as Natives.

It is evident, that the national Debt does not weaken or impede the Current of Trade, which must necessarily happen on the *Exportation* of so much Bullion; and for any thing that appears to the contrary, the *English* are one of the richest trading Nations in *Europe*, and conduct their Affairs with a better Appearance than any other: They have ready Money to pay for all they purchase Abroad, and are always prepared to advance Money on Goods sent them by Commission; few want any Advance on Goods they send Abroad, nor are under the Necessity of Sale for ready Money; and seem to be in as happy a Situation as at the *Treaty of*  
 Vol. I. P. 36, *Utrecht*; when as the *British* Merchant observes, " There are  
 37. " always Goods at Home in their Ware-houses to a considerable  
 " Value, and in many Parts Abroad on *English* Account: Other  
 " Countries may have more Factorage, and get more by Com-  
 " mission, but there is no Nation that has so many true downright  
 " Merchants, who drive all their Trade on their own Capital, as  
 " the *English*".

Now, as the *English* Merchants in foreign Countries, have more to receive than to pay, or that as, *per* Balance, is due to them payable

able at Time, not only Part of the present, but of even the future Produce, comes to be *English* Property.

## S E C T. XXXII.

*France*, however it may be under the Burthen of greater Debts of State than *England*, is yet a more powerful Nation; and altho' it may have lost in its Wars more People, and visibly suffered more Loss in its Shipping and Trade, yet will its natural Superiority in Number of Inhabitants soon retrieve its Affairs; and though many of its Merchants have been ruined, many still subsist, that carry on much the best Part of the Gold and Silver Trade in the *West-Indies* and with *Spain*; and, as the *French* send more Goods in Time of Peace, than other Nations, they must grow richer.

## S E C T. XXXIII.

Before the War, few would believe that the *French* carried on such an extensive Trade, as has since appeared by the Captures made of their Cargoes; and now many are apprehensive that they are likely to become Masters of all the Trade.

*France* contains a great Number of industrious People, so made by the *Arts* of Government; and, if they amass Wealth, and treasure it up apace, that is not to be avoided; but if the *French* do not increase in Number faster than the *English*, there does not seem to be any Danger of their being proportionably more powerful than heretofore.

And, as *England* is so happily situate, and divided from the Continent, and has Wealth and Number of Inhabitants sufficient for every Purpose, Men so favourably circumstanced, are of more Importance, than where many are required to guard fortified Towns, or otherwise engaged in the Army or the Church, and therefore fewer can be spared for Cultivation and Manufactures. In which Light, it is more than probable, that *England* has, in Proportion, more useful People.

S E C T.

## S E C T. XXXIV.

Let the *English*, *French*, *Spaniards*, *Portuguese* and *Dutch*, extend their Trade as much as they can to *America* and the *East-Indies*, whatever People they so employ, cannot injure their Neighbours here; their Trade must employ a great Number of Men and Shipping, and must vend their Commodities; but, whatever Way they circulate their Commerce, they are under a political Necessity of being in Friendship with whom they trade; nor does there seem to be the same Danger from a trading Power, as from the same Neighbour formerly, when the World were less addicted to Commerce.

## S E C T. XXXV.

*Colonies* in the *East* or *West-Indies*, so far as they take off the Useful and Laborious, weaken and divide the Mother-country; however some make even this a Question, as the sparing of certain Numbers who cannot find Means of doing much, is the Cause of others living better when they are gone, and of marrying and propagating their Species more freely, as is rarely the Case of Men in distressed Circumstances. But, not to extend this Argument farther, it is certainly true, that where-ever large Colonies are to be planted, it is more politic to encourage Foreigners, than to transplant too many of the Natives; but it may be justly observed, that both *England* and *France* have many People that do more Harm than Good at Home, and may either of them spare some Thousands annually, and strengthen themselves by it at Home and Abroad; but it must be admitted, that industrious Foreigners are a happy Acquisition.

*Spain* admits none, or rarely any Foreigners in *America*; and the Country being rich and charming to it, Multitudes of the Natives and the *Spaniards*, at the best, not being a very prolific People, they have much weakened and exposed their Country; by which

Means they who were formerly dreaded for their Power, are now simply respected for their Wealth, and in no other Manner have any Influence on the Affairs of *Europe*.

## S E C T. XXXVI.

HOLLAND, which gives to all Foreigners free Access, and treats them upon much the same Footing with the Natives, can never fail abounding in People; nor while they pursue their present Maxims of Frugality and Industry, can they fail of being rich, though hardly possessed of any one staple Manufacture. They are a People whom wise Men emulate, and Fools envy. Their *East-India* Trade, Fisheries, and Employment of Shipping, with other incident Engagements, find Work sufficient for their People, give them a Figure capable of commanding Respect, and of being attended to and courted by their Neighbours. If they are capable of supporting a formidable Force for their own Protection, such Force is not to be dreaded; the same may be said of all Nations attentively turned to Trade; such, nothing but absolute Necessity can engage in a War.

Considering the Power of *France*, the mutual Safety of *England* and *Holland*, makes a firm Union requisite between them, though it is principally necessary on the Part of *Holland*, as lying most exposed: But, as the Loss of *Holland* to *France*, would turn the Balance greatly against *England*, so is it equally the Concern of the *English* to protect the *Dutch*, who, as being a trading People, will never forward their own Reduction by a precipitate War.

## S E C T. XXXVII.

The Grandeur of any Nation consists in its being always in a Condition to command Respect from foreign Powers, as that if any Violence be committed on its Subjects, or Depredations on its Trade, it may be able to give either proper Relief. But, in Order to make  
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the greatest Advantage of Trade, and procure Esteem from Foreigners, Force should only be used in the last Extremity ; (5) and, in Cases of Necessity, to be always ready to assist those with whom we engage in an Intercourse of Commerce ; otherwise to leave them to a free Judgment in the Conduct of their own Affairs.

#### S E C T. XXXVIII.

As every great trading Nation should be provided with necessary Means for Defence, so likewise for Offence ; and to evince the Weight of its Power, when any palpable Injustice is done its Subjects, or notorious Injuries to its Trade.

#### S E C T. XXXIX.

To attempt Branches of Trade, wherein others are fixed, and have been long conversant, cannot be (6) esteemed *Discretion* in a mercantile People ; but to know where, and how far our Wealth can properly operate and extend, is *Wisdom*.

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(5) Some are of Opinion, and Experience seems to have justified, that immediate Reprisal is ever the shortest, surest, and most political Method of coming at equal Justice ; as it not only prevents a War, but, without any Expence to the State, regularly answers all the Purposes of general Violence. But, in Respect to our present Situation, or Connection with *Spain* or *Portugal*, our Factories there and Ships in Port, Reprisal would not be an equal Measure, though it might be otherwise in Respect to *France*.

(6) The Ratio of this Aphorism seems to be, that if we engage in any Scheme of Commerce, wherein a Neighbour State is perfectly conversant and established, it must either happen, that we are defeated or successful ; if defeated, Enmity and Expence ensues ; if successful, the Party injured, will naturally make a reciprocal Attempt on some Branch of Trade, wherein we have been long established ; and the Consequence either Way is obvious : However, this is not a new Case between us and *France* ; they have gained upon us considerably in the Woollen-manufacture, and we on them, in the Silk-manufacture, Linnen, Toys, and Cutlery-ware ; and, upon the Whole, it is probable, the *English* are Gainers. But not so between the *English*, *French*, and *Dutch*, in the *Guinea* Trade, where I think the *English* are the principal Losers ; but that entirely owing to Measures not properly to be here explained.

S E C T.

## S E C T. XL.

In all Countries we meet with unaccountable Attempts for the Improvement of Commerce, usually springing from the prolific Brains of Projectors, who rarely see Things in more than a single Light, and utterly inattentive to universal Principles; of these has lately happened in *England*, a whimsical Attempt to carry on the *Persia* Trade through *Russia*; not considering, that if it took Effect it would be only putting that Branch of Trade into the Hands of the *Russians* at Pleasure, and quite out of the Power of *England* to protect the Undertakers on any Emergency, any more that it was in the Dutchy of *Holstein*, when that State made the very same Attempt to as wise a Purpose; besides the weakening and depressing of the *Turky* Trade, and throwing it wholly into the Hands of the *French*.

It is something like the *Count* of HANAU and *Duke* of MECKLEMBURGH's several Attempts to carry on Trade in the *West-INDIES*, and as some have since attempted in the *East-INDIES* on other People's Bottoms.

## S E C T. XLI.

The *English* have set up a HERRING-FISHERY; for which Kind of Fish there seems not to be a Vent Abroad, equal to the Undertaking, or to what used to be formerly, by Reason of the great *Cod-Fishery* now carried on in *North-America*, and which Commodity is more generally esteemed at the Southern *European* Markets; at the same Time there seems to want Encouragement for the bringing of Fresh Fish to *London* Market, which is, at present, a Monopoly, and the Fish scarce and dear: And, as the main Vent of the Herrings depends on the *West-India* Markets, which are at a Price too low to answer the main Purpose; this favourite Project may, at last, turn out very agreeably, and be the Means of bringing Fresh Fish up to *London* on better Terms.

## S E C T.

## S E C T. XLII.

The *English* and *French* are Candidates in the *Cod-Fishery* for the *Portugal*, *Spanish*, and *Italian* Markets; and it is thought that the *French* gain upon the Trade for Want of Assiduity, or perhaps Frugality, in the *English*; and for this Fish there is a very good Vent: nor can it be presumed, that as *France* is largely extended on the Margin of the Ocean, that it will suffer the being elbowed out of this Trade by any Neighbour Nation, and is therefore only to be over-matched by Frugality, Industry, and superior Skill.

## S E C T. XLIII.

The Encouragement of Fisheries is undoubtedly right in Countries where Seamen should be raised to support a naval Power; but as all Kind of Fisheries contribute thereto, it is presumed, that equal Encouragement should be given to all, the Fishery for the *London* Market, as for the *Herring* Fishery, and for the *Coast-Cod*, for wet salting, and *Newfoundland* dry salted, as to either; that is, supposing it may be intended for the *Herring* Fishery longer than until it may be reasonably well established.

## S E C T. XLIV.

People not only vary in Taste, but in Fancy too, as they improve in Wealth. The Manner of curing the *Atun*, or *Tunny* Fish, which formerly produced a fine Income to the Ducal House of *Medina Sidonia* in *Spain*, is now no longer relished, and dried Fish most generally in Use, which may be meliorated and dressed in any Kind of agreeable Variety.

## S E C T. XLV.

In Countries where the People are most turned to Invention, and to the manufacturing Works of Fancy, as well as Necessity,

and such principally out of their own Materials, they will customarily surpass their Neighbours in the Art of Trade, and create a Balance in their own Favour.

## S E C T. XLVI.

In a Country, where there are not Hands enough to work up the native Materials, nor can be procured, Exportation of the Superfluous, and what any singular Manufacture does not materially depend upon, is an evident Benefit, and no Disadvantage to receive Necessaries in Return.

It is better, in a Land scarce of Grain, to lay the Hand to the *Plow* than to the *Loom*.

Any Constraint from acting in this or that industrious Pursuit, in the like Manner as is permitted in other Countries, incites Men to leave their own Homes, and to retire Abroad.

## S E C T. XLVII.

The Variety of Things permitted for our Use or Recreation, is a Reason, why that People to profess and enjoy them should be diligent, and save so much out of the Produce of their Labour, as will procure them such in common with others.

Every foreign, as well as domestic Manufacture, has in itself an intrinsic Value, however small it may be.

## S E C T. XLVIII.

It is not from hence to be inferred, that it is equal to employ our Money in foreign as in domestic Manufactures; but that as it must happen if we sell, it cannot be expected that we should never buy, as it is buying, as well as selling, that makes up the Sum and Substance of Trade; and should we work only for Sale, our Hands must be employed in Manufactures of more Benefit to the Purchasers than themselves. It is therefore best, that those,

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who,

who by Diligence and Industry acquire Wealth, be at Liberty to enjoy the Benefit thereof in their own Way of dealing, so that the same be not inconsistent with the common Good of Society.

## S E C T. XLIX.

It has a very happy Effect on Society, when Persons of high Rank make their chief Expence center in the Produce of early Fruits and costly Things of their own Country: It is only then, that the Doctrine of Mons. *Melon*, in his *Essai Politique sur le Commerce*, holds good, where he says, “ Pour quoi se recrier sur  
“ cette folle dépense? Cet argent gagné dans son coffre seroit mort  
“ pour la société: Le Jardinier le recoit, il l’a mérité par son tra-  
“ vail excité de nouveau; ses enfans presque nuds en sont habillés,  
“ ils mangent du pain abondamment, se portent mieux & travail-  
“ lent avec une esperance gaie: Il ne serviroit aux Mendiens qu’a  
“ entretenir leur oisivete, & leur sale débauche.”

## S E C T. L.

But I disagree when he says, “ Les spectacles ne sauroient etre  
“ trop grands, trop magnifiques, & trop multiplies——c’est un  
“ Commerce ou la France recoit —— toujours sans donner,” which is presuming that none go to *public Entertainments*, but such as live merely on their Incomes. But in *France*, as in other Countries, I doubt not the contrary being evident; and they are, in their Nature, so far bad, as they wean the Industrious from Attention to Business, by imbibing idle Notions, and can only be esteemed profitable to *France*, as they contribute to the decoying Foreigners over to spend their Money amongst them, which may not perhaps, in any Sense balance the domestic Injury done by such airy Productions of Whim or Fancy.

## S E C T.

## S E C T. LI.

However, in all Countries, where there are a Number of People, wealthy by Inheritance or Acquisition, it is right that it be some Way circulated for the common Benefit, and Opportunity given, rather to its being spent at Home than Abroad.

It seems good Policy, in Time of War, to permit those who have acquired Riches, freely to expend the same, to prevent their quitting the public Service, and turning their Thoughts another Way, and it is best for the Community that this be done at Home.

## LII.

When all Things are considered together, the same Principles hold good in a Nation or other Community, as in a private Family; they must, in order to be wealthy, labour for more than they want, or in other Words, spend less than their Incomes.

When the two greatest Nations in *Europe* continued longer in a War than either of them could regularly afford, Time, the great Regulator of human Conduct, obliged them both to be content with Peace.

*War* has the same Effect on Nations, as Contentions on private Families; they at last, both set down Losers.

## S E C T. LIII.

Kingdoms and Cities, as well as private Men, may sometimes purchase Peace too dear, as all Objects are not of the same Value in all Places.

A Peace with *Algiers* is not alike valuable to *Sweden* or *Denmark* as to *England*, *France*, or *Holland*, the former not having any Thing like the Number of Ships in Trade, nor are so well situate for carrying it on as the latter, as having no Opportunity of employing them to Advantage, and therefore could not be of any Advantage to have them.

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If the Question was stated, what Value a Peace with the *Barbary* States would be to a free independant City? I answer, nothing otherwise than could be proved more profitable in the Employment of their own Shipping, than those of other Nations; and, if it shall appear that Shipping-business is generally overdone, it is perhaps better for them to receive their Goods in foreign Bottoms, and consequently such Peace is of no Significance to them.

In this, a trading free City differs from a maritime Kingdom, where the fitting out, victualling, &c. is chiefly their own Produce, and where, though the Owners may lose, the Nation must be Gainers; but in such a City, distinctly considered, if the Profit upon the Freight, and upon the Materials, do not compensate what the Maintenance of a Ship costs, it is better not undertaken.

Suppose it appears by this Reasoning, that a City loses upon the Whole by the Whale-Fishery, it would, surely, be better to quit it, though it may not be amiss to remain with their Neighbours, especially when it shall appear that some Profit may result to them from the same Commodity, in the general Circulation of Trade with other Nations, by dealing in Whalebone and Oil occasionally, as they shall be found meriting Attention.

#### S E C T. LIV.

In a City, full of rich Inhabitants, and well situate for Trade, where Liberty is preserved, Justice pursued, and Faith and good Order reigns, Trade will always remain and flourish; and, while more grow rich than decay, the Increase of Wealth will be visible; so the greatest Veneration is due to those Citizens, who so far endeavour to acquire Riches, as to live decently, and in common to encourage so much Shew of Magnificence, as may engage Foreigners to visit and reside sometimes amongst them.

#### S E C T.

## S E C T. LV.

The best Recommendation for the Employment of People in the public Service, independent of the Merit of their Ancestors, should be, their having given good Proof of knowing how to govern themselves, as not having lived above their Condition, nor purchased too dear whatever Qualities they may have acquired Abroad.

A trading City can rather spare a Man deep in learned Lore, than a rich Man, who has only learned so much, as to keep his Stock together; for, if he is not acquainted with the Arts of Trade, others will act for him, and his Money will operate more for the Benefit of the Society, than many full Heads, with empty Purfes: However, wise Governours will make every Kind of Knowledge turn to Account; and, it is somewhere said, that a poor wise Man once saved the City.

## S E C T. LVI.

The more notorious it is, that the Income of a Country, City, or of an Individual, is more than they expend, the more doth their respective Credit advantage them; which Credit is, in many Respects, as serviceable to them as their Money.

## S E C T. LVII.

However great the national Debt and annual Expences of the Government are in *England*, it is generally agreed, that since the Re-establishment of Peace, the public Revenues amount to more than the Out-goings, inasmuch as the Sinking-Fund amounts to above what may be applied: And, as no Money is ever borrowed for the Nation's Use, but a Fund is assigned for the Payment of the Interest, inalienably appropriated; and, as in other Nations, such Credit is insecure, as being subject to arbitrary Alterations, it certainly concludes, that greater Things may be performed by the Credit of *England*, than of any other Country.

H

S E C T.

## S E C T. LVIII.

A great Benefit results from the public Cash, and the greater Part of the Trade of *England* centring in *London*, whereby when there is not any Fear of an Alteration in Government, most Species of Commodities are oftner assignable on Credit than through the Intervention of Money, by the Channel of the Bank, whose Notes answer the Purpose of common Circulation; and therefore may, occasionally, make a double Use of their Cash.

## S E C T. LIX.

A Bank cannot be any where so extensive as in *London*; nor can such Wonders be performed by Banks as People usually imagine. The *French* Author of the *Essay* upon Commerce, after relating some Circumstances of the Banks of *Venice*, *Amsterdam*, and *Hamburg*, says, "C'est à ce credit que les Republiques doivent leurs richesses & leur puissance," I am, on the contrary, confident, that the Fountains whence these Republicks drew their Wealth and Power, had their respective Sources in the Liberty of the People, and Protection of their Property: It was this increased their Numbers, and excited them to personal Diligence, and out of Industry and Frugality, their Augmentation of Wealth and Power hath grown.

## S E C T. LX.

Bank of Eng-  
land.

The *Bank* of *ENGLAND* consists of two Sorts of Creditors; the one of that Sett of Men who, in King *William's* Time, when Money was scarce and dear, lent the Public 1,200,000 Pounds at 8 *per Cent.* Interest, and 4000 Pounds allowed them for Charges, amounting in the Whole to 100,000 Pounds a Year, an exclusive Right of Banking as a Corporation for thirteen Years, under the Denomination of the Proprietors of the Bank; and which, for obtaining Prolongation of their Privileges, has been since increased by further Loans to the Public at lesser Interest, to near the Sum of

of 11,000,000, which, if we compute the Interest of 3 *per Cent.* (as what they have more on some Part answers incident Charges) it produces 330,000 Pounds a Year; and as they divide annually 5 *per Cent.* to their Proprietors, which is 550,000 Pounds, it is evident that they make a yearly Profit of 220,000 Pounds out of the Money of the People who keep Cash with them; and these are the other Sort of Creditors. And, as for what Money the Bank lends the Government, they have, for the most part, but 3 *per Cent.* Interest, I conclude that the Credit-cash in their Hands may amount to 11,000,000; and thereout is employed in Loans to the Government, discounting of Bills, and in buying Gold and Silver, 7,333,333  $\frac{1}{3}$  Pounds, which, at 3 *per Cent.* Interest or Profit, will amount to the above 220,000 Pounds, and remains 3,666,666  $\frac{2}{3}$  in Cash sufficient for Circulation and current Payment. And Experience has evinced, that whenever any Mistrust has occasioned any Run upon the Bank, for any Continuance, and the People not finding the Treasure so soon exhausted as they surmised, it flowed in again faster on the one Hand, than it was drawn out by another.

The Bank, at present, advances to the Government at the Rate of 3 *per Cent.* 1,400,000 Pounds, to be repaid out of the next Overplus of the Sinking-Fund, for the paying of Navy-bills running against the Government at *per Cent.* Interest, unprovided by Parliament; and some think the Bank may advance for all Navy-bills so running, as it is Peace, and no Mistrust of their Power; and, as they do not lend Money, but Paper, upon which striking Principle it might as well be concluded, that the Bank was able to advance the whole national Debt to the Government. But, if these Gentlemen are at leisure to think, they will find that no Bank-Notes can be circulated for a greater Sum, than what is equivalent to ready Money Demands; and that the Bank, with the ready Cash deposited by those who keep Accounts with them, or for Notes only, actually circulates as many Notes as the Public will take, which never can exceed that Sum, which the People

would keep at Home in Specie, if there was no Bank. Now if the Bank, from the 11,000,000 supposed above, is the full Amount of all the Cash in their Hands, by the Dividends they make, it is proved, that they use about 7,000,000 yearly in Advance to the Government, upon Land, Malt, Discount of Bills, Trade in Silver and Gold, &c. it is comprehensible enough, that extending themselves further to a Loan of 1,400,000 Pounds, they go as far as Prudence permits; and the People within-doors, seeing what Cash they are answerable for, what is in Hand, and what Quantity of Bank-Notes satisfies the Public, and what, upon such Sort of Advances, has struck at their Credit, can judge better what they are able to do, than People without-doors. If more Bank-Notes are issued than is necessary, they must naturally return again, as no body will keep more Notes by them, without Interest, than just what is wanted; and therefore I suppose, that the Public is stocked with as many as the Nature of our public and private Transactions permit. And whilst the Proprietors of the Bank have Opportunity of circulating as many Notes, as by the Profit of the Cash on Loans gains them 3 a 4 *per Cent.* it is not reasonable that they should lend them on Deposits of Silver to private People at less Interest; although the same is done at *Amsterdam*, where the Bank is of quite another Nature, and has no other Opportunity of making such other Profits, as is evident the Bank of *England* have.

In *London*, besides this incorporated *Bank*, with sole and exclusive Privileges, and of which any one may become a Member, by purchasing of Stock, which is transferable, it is free to all private Persons to make banking their Business; and there are many Bankers with large Capitals, and with whom People keep Cash; these likewise make Interest of the Money of others, and are justified in the doing it, as they charge nothing for their Trouble.

Nevertheless, all Banks and Bankers, ought to be very clear in their Strength or Abilities to lend, and so to calculate their Stock

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of Cash as never to be found in Deficiency, this being the sure Rule of establishing their Credit, and augmenting their Business.

As the Profit of the *Bank of England* arises principally from Government Loans; and the Credit of their Notes, and as the Government keeps Cash with them, as well as private People, they do, and always ought, to serve the Government on easy Terms, as it facilitates the Circulation of their Notes, by taking them in Payment in all the public Offices; which, if they did not, the Draught must be very great on them for Cash, and consequently could not dispose of so much for the Benefit of the Proprietors, as at present they are enabled thereby to do.

I apprehend, that the Cash of all the Merchants and Men of Business, as may have Accounts with the Bank, of whose Number I shall speak more presently, would not amount to half the Sum, if the Government's and public Companies Cash did not pass thro' their Hands; from whence it follows, that if any Person in the Management of the Bank will merely reason in the same Manner, as he does in his private Capacity, as why the Bank should not take as much Interest from the Government as from other People? Why serve the *East-India* Company on better Terms? Why discount Merchants Bills at 4 *per Cent.* when they can have 5? I say, a Man so reasoning, should study to be better informed.

On the other Hand, as by the Means of the Bank, the Government obtains Money on more easy Terms, and can always, on a sudden, find Assistance there, great Care should be taken not to do any Thing to its Prejudice, or to injure its Credit; nor should the Gentlemen in the Management of the Bank, ever suffer themselves to be led beyond certain Bounds, by Experience proved to be too enterprising. It is hoped, that some make it their Study to know the Strength of their Body, so as to rectify what they find to have been faulty.

They have had the Experience of two Rebellions, when the Government required more Cash, for the Use of the Army, and Bank Notes, not equally significant when amongst private People, there

was a Mistrust of public Credit, and a Run against the Bank continued some Time; they can thereby judge of the Effect it had upon the Whole, how much it lessened their Treasure? What Specie remained? What Quantity of Bank-Notes still circulated? And whether the Method they made use of answered their Purpose? Of all which it is difficult to form a Judgment without-doors: Yet, to me, as a Stranger, residing in *England*, during the last Rebellion, it seems that some of the Methods, then used, had little, and some of them, quite contrary Effect.

One of the first was that of the Subscription; or, as it is usually called, the Circulation, which is annually created to lend the Bank a Million for the Year at *per Cent.* whenever called for; on which Account 10 *per Cent.* is paid in to be forfeited on Failure of future Calls; and although, upon all other Occasions, the Subscription has been filled, for the most part, by People in the Management and their Favourites, it was whispered, at this Time, not to be full, and only upon a further Call for 10 *per Cent.* more, the Subscribers were out of their Wits, and sold at *per Cent.* (7) Loss to saddle it on other People. But, suppose the Subscribers had entirely made good their Engagements, it could not have answered the proposed Purpose; that is, in Case of a Run upon the Bank, they might, by this Means, have obtained a fresh Supply; for the Subscribers, being Persons who generally keep Accounts with the Bank, comply by making Assignments of their Property, which truly is and ought to be esteemed good Payment, but answers not

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(7) The Subscriptions are 1000 Pounds each, and for 10 *per Cent.* paid in, or 100 Pounds is given 6  $\frac{1}{2}$  *per Cent.* and for all future Calls 4 *per Cent.* only, the Advance 2  $\frac{1}{2}$  on the first 100, makes the Subscription courted; and those who have Interest to procure it, commonly dispose of it again in *Change-Alley* at a handsome Advance, before even they have paid in their Subscription-money; and as this can be so done, it is of great Advantage to the Directors and their Friends; and as much of this is so disposed, it rests in the Hands of the Purchasers, who, generally speaking, have neither Interest in, nor Account with the Bank, nor often any other Money, it being thought no Risk, as the Calls have never been made, but on very extraordinary Emergencies.

the Purpose for which the Subscription was intended, the bringing in a Supply of Specie to answer the Requisition of mistrustful People. It should seem to answer the Purpose better, if the first 10 *per Cent.* was made by Assignment, and the Subscribers on future Calls be obliged to bring in foreign Gold or Silver at Standard Price ; which Condition, though it would certainly merit a higher Premium than is now given, yet I think it would be well bestowed.

But, as the Subscribers are answerable to, and Contractors with the Proprietors of the Bank, the Trustees should never be admitted in any such Subscription to a larger Share than they possess of Bank-Stock.

There is another Thing, which, to my Apprehension, was equally a Mistake ; it was the purchasing large Quantities of Silver, brought in by the Privateers, and giving Bank-Notes or ready Credit on Account for it, which increased the Run faster on one Side, than they could coin it on the other, and from which they might probably have been excused, by obtaining his Majesty's Proclamation for the current passing of foreign Bullion at *per Ounce*, whereby the Charge of  $2\frac{1}{2}$  *per Cent.* would have been saved to the Nation on the Coinage, and for which, when public Credit came to be restored, there was not any Occasion, and must needs go to the melting Pot again.

It seemed likewise very bad Policy, to make use of the last Resort, the paying only in small silver Coin, as it naturally with the Mistrust increased the Run. I am apprehensive, that Bank-Notes would have been more useful for the King's Service, if they had not made the Change of them so difficult, and which could not have happened, if while there was any Quantity of Gold and Silver, they had continued to have paid in the usual Manner (8).

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(8) Perhaps the Reason of paying in small Silver might be a Suspicion, or something more, that much of the Money, so attempted to be drawn out, was to supply the Rebel Army ; in which Case this Method rendered it in some Measure impracticable.

But,

But one very good Thing was then hit upon by some Persons out of doors in Favour of the Bank, and which ought to be retained in Memory, as the Specific to be made use of on the like Occasion; this was an honorary Engagement, entered into by almost all the Merchants, Bankers, and Men of Business, to take in Payment, any Notes or Assignments in the Bank, whereby further evil Consequences were avoided, and Time gained for every one to prepare himself for the worst; and if we consider as it is explained in Section XXIX. what small Part the Money maketh amongst the Goods, wherein the Riches of a Nation consisteth, their Fear from a Stoppage of the *Bank* need not have been so great, because, such Goods would soon have fetched from Abroad, what Specie was wanted: And however great and good the *Bank* and national Credit of *England* may be, the national Wealth is in the Overplus of Effects possessed by Individuals, where Plenty glances over most Parts of the Kingdom. And although some of its Neighbours may have more circulating Coin, yet will none be found who have so much wrought Plate, Jewels, &c. and what is better than all, so great Value in Goods, Provisions, and Stores more than what the Kingdom wants.

## S E C T. LXI.

Bank of *Am-*  
*sterdam.*

The *Bank of Amsterdam* has the Fame of more Treasure than any other; the *French* Author of The Essay on Commerce says its Capital is 400,000,000 of Guilders; and the *Amsterdam* Edition of that Book is noted in the Margin 8 or 900,000,000, which amounts to 80,000,000 Sterling. *Davenant* seems assured that it is 36,000,000 Sterling, effectual Money Gold and Silver in Bank, and that their Transactions are not with Money, but by Assignments.

But, as such Assignments cannot be made out but with or by the Intervention of those that keep Accounts with the *Bank*, if then we can make a shrewd Guess at their Number, it may be nearly concluded what the Sum amounts to; as it is not to be presumed that

that any Money can be in the Bank but what some body must stand Creditor for. Now it is known, that although *Amsterdam* has in Proportion to its Inhabitants, more Merchants than *London*; but as *London* contains four to one more People than *Amsterdam*, there are more Merchants and Men of Business, who keep Accounts with the *Bank*. The utmost which appear in the (9) *London* Directory are 2800, and most probably at *Amsterdam* not half so many; and altho' many have Accounts with the Bank who are not resident in *Amsterdam*, it is the same in respect to *London*; and if it was even admitted that there were in *Amsterdam* 3000, and each of these to have on Advance 10,000 Guilders, the Amount is 30,000,000 of Guilders; and if 20,000, 60,000,000, which I am persuaded is much nearer the Truth than what is asserted above.

It is known in *Amsterdam*, that besides *Bank*-money, there are various other foreign Species current, and that a great Number of *Traders* do not keep Accounts with the *Bank*. A Treasure of 60,000,000 of Guilders is 5,500,000 Pounds Sterling, and is a Sum wherewith great Things may be done for the public Service.

Sir WILLIAM TEMPLE says, "The Place which contains the  
 " Treasure, is a great Vault under the *Stadt-house*, made strong  
 " with Doors, Locks, and other appearing Cautions of Safety; and  
 " it is certain, that whoever is carried to the *Bank*, shall never fail  
 " to find the Face of mighty real Treasure in Bars of *Gold* and  
 " *Silver*, and may be so for ought he knows. But the *Burgo-*  
 " *master* having only the Inspection of this *Bank*, and none other  
 " taking any Account of what comes in or issues out from Age to  
 " Age, it is impossible to make any Guess what Proportion the  
 " real Treasure holds to the Credit of it."

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(9) It is to be further observed, that there are many in the *London* Directory that keep Cash with private Bankers; but there are likewise many who are not in the *London* Directory, that keep Cash in the Bank, and to a very large Amount; and who, not being trading People, rest it longer there, besides the public Companies, which is not the Case in *Holland*.

Whereby even Sir *William* seems to doubt if all is *Silver* and *Gold* contained in the Bags; but I doubt it not in the least, because we know, that while it only remains as a Deposit, the *Bullion* is at the Disposition of him who made it; so there must be continually a great Store that Way. Perhaps Sir *William* never saw 2 or 3 Millions Sterling Gold and Silver disposed in Ware-houses, as is commonly the Case at *Cadiz*, on the Arrival of the Galeons, as is seen by People resident there; and there is perhaps in the Possession of a neighbouring PRINCE, more Treasure than in the Bank of *Amsterdam*.

The *Bank MONEY* is fixed to be regulated by *Ducatoons* of 14 Loet 16 Grains fine at 3 Guilders, or 60 Stivers Bank Money, which pass in Current for 63 Stivers, and so compound an *Agio* of 5 per Cent. yet as a Quantity of *Ducatoons* is not always to be met with, the *Agio* rises and falls.

But you may bring in several Kinds of Specie into the Bank, and you will have Credit for it, at  $\frac{1}{4}$ ,  $\frac{1}{8}$ ,  $\frac{1}{16}$  per Cent. Interest for six Months, and are kept placed to your Account so long as you pay the said Rates of Interest.

By a Letter dated the 10th of *December*, 1751, I received the following Information from *Amsterdam*, of the several Species that can be deposited at the Bank, viz.

GOLD in Cruzades by Marks 22, for which the Bank makes good at — — — 310 F. per Mark.  
Ducats weighty by 1000 Pieces, at 4 F. 19 Stivers, more or less.

## S I L V E R S P E C I E S.

<i>Mexico</i> Dollars, by Marks 100 —	F. 22 per Mark	} With 2 Pieces above each 100 Marks.
Pillars — — 100 —	Ditto — —	
Sevilians — — 100 —	Ditto — —	
Crowns <i>French</i> — — 100 —	Ditto — —	

SILVER

## S I L V E R   S P E C I E S.

Ducatoons old, by 200 } 26 : 2 : 15 ——— 60 Stivers *per* Piece.  
 Pieces, weighing Mar. }

Ditto new — — 200 26 : 3 : 12  $\frac{1}{2}$  Ditto, Ditto

Rixdollars — 200 22 : 5 : 12  $\frac{1}{2}$  48 Stivers, Ditto

These Species being brought in, and left in the Bank, must be renewed every six Months, and made good to the Bank :

$\frac{1}{2}$  *per Cent.* on the Gold,

$\frac{1}{4}$  Ditto on the Pieces of  $\frac{3}{8}$  and Rixdollars,

$\frac{1}{8}$  Ditto on the Ducatoons ;

But can be taken out again at any Time, by making good to the Bank the above  $\frac{1}{2}$ ,  $\frac{1}{4}$ , or  $\frac{1}{8}$  *per Cent.* over and above the Capital.

The greatest Loans are made upon *Spanish* Piafters, on which they lend 22 *per Cent.* *per* Mark, paying  $\frac{1}{4}$  *per Cent.* for six Months, for which small Premium, you have a Chance for the Rise during six Months in your Favour, which often happens within the Time, and is a great Encouragement for the Trade of Bullion ; and altho' the Premium so taken by the Bank is small, yet the great Sums so lent, must make the Profits very considerable in the Circuit of the Year, and without any Manner of Hazard ; because it is not Money, but only Credit, which they lend, or assign you ; which Credit, upon drawing out the Bullion, is re-assigned. *J. P. R.* in his *Negoce de Amsterdam*.

In ENGLAND I have often heard the Merchants murmur against the Directors of the Bank, for not doing the same as at *Amsterdam* ; for, say they, what is it they lend, but their Notes ? And if Cash is necessary, can it not always be coined out of Gold and Silver ? And truly this seems at first to strike ; but when the Change of Coinage is considered, (*Vid. Sect. LXXVIII. infra*) it is hardly to be expected that the Government should be exposed to the losing  
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of such Sums without Limit for a Profit to the Bank of only  $\frac{1}{4}$  per Cent. Besides that the Coinage is limited by Parliament at 15,000 Pounds a Year.

In the *Bank* of ENGLAND, the Gold, Silver, and Credit, runs promiscuously, but in *Amsterdam* they are separate Things. If at *Amsterdam* you have great Credit, you have no Right to call for Ducatoons at 60 Stivers, as at *London*, Guineas at 21 Shillings, but only he who brings in Money by Way of Deposit, while he continues to pay for its keeping, has a Right to draw it out in the same Specie; upon which, in the mean while, he stands credited, and may assign against that Credit to other People, who have Demands upon him for Bank Money, and they may assign farther.

It is not very likely, that when People first brought their Money into Bank, that they divested themselves of a Right to draw it out again at Pleasure. But perhaps, in Process of Time, some Inconveniencies resulted to the Public, by the drawing of too large Sums out at once, which induced the Proprietors, as good Patriots, to consent to its being kept there altogether; or perhaps by the Sums deposited at fixed Prices, and the Falls of Gold and Silver, it might happen, that People left some Parcels in their Hands, which is become a fixed Treasure in the Custody of the *Bank*; and since the Profit of the Bank is applied to the public Service, Nobody will blame the Persons in the Management, for making some beneficial Use of their Wealth.

Besides the Profit of lending on Gold and Silver, it is known, that they furnish the *Lombards* with Money, &c. and how much or little they keep in Hand for those who have Credit, and only a Right of assigning against it, Knowledge of the Remainder centers in very few. Yet every body knows, that there always lays a great Treasure; and while the Depositors continue to pay Interest, they are sure that their Deposits are preserved for them in their own Bags, sealed up, ready to be delivered at any Time.

By thus giving Credit in their Books, the Bank is not in any Manner exposed to a Run upon them, but it is for him that maketh the Deposit, to know how far he can make Use of assigning on the Bank, which has its Bounds, and cannot extend itself beyond the Circle of *Amsterdam* Exchange-business. And although *Amsterdam* has made itself the greatest Place for Exchange to most of the trading Cities in *Europe*; and all Bills above 300 Guilders, by Law, must be paid in Bank-Money, which gives a large Field for Assignments; yet it will not go beyond the Amount of Cash, which would else satisfy the Demands naturally occurring to that Number of People who keep Accounts there, so cannot extend its Credit further than is hinted above Sect. XXIX.

Whence another Question may arise, that as the Possessors of Accounts of Gold and Silver brought in by Way of Deposit, have only a Right to call for Specie, how would it be for all other People, who have Money good upon their Accounts, in Case of Danger, as of an approaching Enemy, &c.?

There then must, doubtless, a general Assembly reside in the Majority of the People concerned, with Power to call their Trustees to Account, and to demand a proportionate Share of what Cash there is; and, I doubt not, but that they have a good Stock of Specie in Reserve for that Purpose: But, the same as in the Credit of the *Bank of London*, much of it might be out and otherwise invested, perhaps lent to the Public, which the *Bank of Amsterdam* can do with more Security than the *Bank at London*, as it is not equally exposed to a sudden Run upon it.

In 1672, when the *French Army* were in *Utrecht*, the People of *Amsterdam* thought themselves in great Danger; and were pressing to draw out Money from the Bank, which accommodated as many as they could, keeping all Hands at work to pay out Money; but as all could not be dispatched so soon as they wished, some sold their Credit at 4 or 5 *per Cent.* Discount; whereupon

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several rich Men appearing to buy, which the People perceiving, the Run soon ceased, and the Money was as fast paid in again.

Upon the whole, I find the Banks of *London* and *Amsterdam* equal in Goodness; and although the last has a great Name, yet that the first very much exceeds in Value.

## S E C T. LXII.

Bank of *Hamb-*  
*burgh.*

The *Bank* of HAMBURGH, besides easing the Merchants of the Trouble of counting their Money, seems to be an essential Benefit to the City, as having determined not to take therein any Specie in Payment but Rixdollars of full two Loot Weight of their own, and of the Standard of the Empire, which is  $14\frac{4}{16}$  fine in 16, whereby they can keep up a certain Proportion of all other Coins to the Value of Goods, so as to answer the fixed Bank-standard, which is of Consequence to them, as it opens to their View instantly, what Damage any foreign Alteration in Coin causes, by which Means all their Affairs are regularly adjusted and ascertained.

By Sir ISAAC NEWTON's Assay, a *Hamburgh Bank* RIXDOLLAR was found 8 Penny-weight worse than *English* STANDARD.

This *Bank* was first erected in 1619, wherein the Citizens only are permitted to keep Accounts; and according to the Multiplicity of each Man's Business, he, every Year, on paying a Gratuity to the Clerks, takes up a new *Folium*, or the Number upon which his Accounts stand in the Bank Leidger. When Specie is brought in, the Bank gives Credit for each 1000,—1001; and when Specie is drawn out, makes the Drawer Debtor  $1001\frac{1}{2}$ , so that the Bank has  $\frac{1}{2}$  per 1000 for Trouble and Charges; and till of late Years, all who had Demands, drew out what Cash they pleased; but, for some Time past, it being alledged that such Draughts might expose the City to be drained of all its good Coin, a Method has been settled for drawing only within certain Limits prescribed, which proceed partly from a Coinage of current Money, which the City  
made

made in 1726, out of the general Bank Cash; when, till that was effected and dispersed, it must needs cause a Stoppage in Part, of answering all the Specie Demands.

By its Institution, published *December 31, 1639*, Article XXXII, it is said, "That the Bank shall not make any Loans, but upon Hypothecations, or Deposits of Gold or Silver, and only when there is a great Store of Cash." However, it is known, that, at present, they lend upon Copper at  $2, 2\frac{1}{2}$  per Cent. Interest, that they furnish the *Lombard House* with what Money it wants for Loans on private Pledges; and that it lays in Stocks of Grain for the Use of the Public. When I was Apprentice in *Hamburg*, their *Folios* did not amount to above 600; whence it may be concluded, that no more kept Accounts in Bank: And as Merchants rarely let much Cash lie unemployed, I cannot think that the Treasure is so considerable as many imagine. I have heard the People of *Hamburg* complain of their Bank not letting out Money as cheap as that at *Amsterdam*, but the Difference is obvious; as the Bank of *Hamburg*, like that at *London*, is subject to a Demand of real Specie, which that of *Amsterdam* is not, as before remarked; and therefore under its present Limitation, cannot be otherwise conducted for the public Service. But, it is certain, that was it opened to Foreigners, and for the Reception of different Coins, it might be made proportionably more beneficial to the City.

#### S E C T. LXIII.

There are *Banks* of divers Nature in several other trading Cities.

NUREMBERG has one established ever since the Year 1621; Bank of Nuremberg. and by a new Regulation, published *Aug. 26, 1721*, Article VII. the Bank is only to receive Silver-Coin, such as, till then, had been usual, viz. all *Guilders*, whole and half *Rixdollars* of the Emperor's, Electoral Princes, and Cities of the Empire; *French Guilders*, such as had been usually admitted; *Saxon* and *Brandenburg*

*burgh* Guilders, or those so called, new  $\frac{3}{4}$  Pieces, and no other Sorts of Coin.

The Persons who keep Account with the Bank at *Nuremburgh*, are obliged to pay by Article VIII. six Cruitzers, *i. e.* about Fourpence for each Sum that they receive and pay, as at *Amsterdam* 2 Stivers for each Sum they write off there. All Bills of Exchange amounting to 50 Guilders, and upwards, and the Value of all Goods amounting to 200 Florins and upwards, are by Article III. to be paid through the Bank.

It appears by Article X. that there is not any Limitation of drawing out Sums of 50 Guilders and upwards.

Bank of *Venice*.

VENICE likewise has a Bank *del Giro* of long standing; and in the regular Course of Trade, most Bills of Exchange from Abroad are made payable in Bank, the Payment, like as at *Amsterdam*, being only by Assignment from one Account to the other, for which the Republic is jointly bound, and bears an Agio of 20 *per Cent.* and a Super-agio of 17 a 18 *per Cent.* which could not be, if they did not remain within certain bounds, and is a Security merely depending upon the Credit of the Republic: *Bills of Exchange* are in the common Course, not payable in Bank but with Cash, and customarily Transactions in Trade are done in this Place for Specie.

Bank of *Genoa*.

GENOA. The Bank of ST. GEORGE was in high Credit, until the Government impolitically entered into the late War, wherein, having expended the State-Treasure, which was the Basis whereon it was constructed, the whole Building necessarily fell, and will with great Difficulty, if ever again be recovered. This justifies some of the preceding Maxims, and evinces how cautious a trading Republic ought to be of embroiling themselves in the Altercations or Disputes of the powerful Princes on the Continent, or in any warlike Engagement, but what immediately respects the smoothly carrying on, or Support of Commerce.

*Dominico Peri*, in his *Negriante*, gives us a Description in what Manner the Revenues of the Republic were appropriated to the Support of the Bank, and of the Nature and Value of the Treasure. But the Debts of the State are at present so large, that sufficient Funds cannot be found to make good the Interest; and while that is the Case, it will be impossible to recover its Credit.

Upon the whole, they are the best and securest Banks, that are judiciously kept within certain Bounds; and if they lend out any of the Money intrusted to their Care, that they do it on Effects which at all Times bear an equivalent saleable Value; and are in their own Power to be turned readily into Cash.

## S E C T. LXIV.

At such Places only where daily great Sums of Money are paid forward and backward, and a great Store always remains amongst its Inhabitants, by erecting a Bank much Trouble in counting of Money is saved, and with the Cash some Utility may be produced to the Public without any Detriment to the Bank-creditors.

In Countries where Experience has shewn, that national Debts have always been well paid, many Things may be as well obtained with public Credit, as with Cash; and when Bank Bills pass current, it is in the Power of the Bank to be serviceable to the Public, but it ought nevertheless to be grounded upon real Value in Possession. And if for Bank-notes, all Goods, Arms, Ammunitions, &c. cannot be purchased as well as with Money, it will betoken Want of Credit, and its Condition suspected.

Attempts to obtrude upon People more of such Notes than the Nature or Circumstances of Times will permit, or that readily would pass amongst them in lieu of Money, have always miscarried.

## S E C T. LXV.

Trading Nations, who are not only stocked at Home with Money, but with all Kind of Things worth Money, have Goods

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Abroad,

Abroad, and Debts outstanding, with whom they trade, are the less exposed to any sudden Ruin, as where their Demands are, their Friends will be, such Credit and Effects operating powerfully in Favour of their native Country.

The *King* of ENGLAND, in his Merchants, who trade in all Countries, and have every where Effects lying on their Accounts, if such Merchants are well affected, is better supported by their Wealth so divided, than the Kings of *Spain* and *Portugal*, the Wealth of whose Subjects lies chiefly in the *West-Indies*, as 10,000 Pounds at Home, or near about us, is of more Service than 20,000 at so great a Distance.

#### S E C T. LXVI.

From our exporting Goods by one Set of Men, and importing them by another, arises a third Sort, which acts the middle Man between both, in receiving or paying their Money Abroad, or supplying them before-hand, which are the Dealers in Bills of Exchange, payable at a certain Time Abroad, and receive from thence Bills payable at a certain Time at Home, whose Regulation is governed, little more or less, by the intrinsic Value every Country's Coin contains, making an Allowance for the Time they stand in Disbursement, and what is saved by not sending the Money backward and forward, whereby such Dealers make now and then something more than common Interest. And as they also have on Account of People Abroad, much to receive and pay, the Intervals which naturally occur, gives Room for making another Benefit, and in these Men is a further Strength at Home, as they are both foreign and domestic Bankers.

#### S E C T. LXVII.

It is known amongst Merchants, that in those Countries from whence Goods of a greater Value are exported, than imported, either Balance or Money may come Home, or it may tend to the In-

Increase of our Property Abroad, by keeping it there, in Money or Value at Disposal. Thus it is not merely by the Quantity of Gold and Silver circulating amongst us, that we are to judge of our Merchants Wealth, but rather by what Goods they have at Home and Abroad; and when we find that Goods lie every where on their Account, and People Abroad stand indebted to us, it is a surer Mark of being powerful and rich, than by our having somewhat more or less of Cash at Home, as it is the least Part of their Wealth, and which none in Trade keep by them more than is immediately necessary. And however strange it may appear, it is certainly better to have a Stock of Commodities Abroad, than ready Money lying dead at Home.

# S E C T. LXVIII.

In Time of Peace, when there is no Need of circulating Money for the public Service, but proceeds from the Current of Trade, we have the Course of Exchange compared with the intrinsic Value of the Coin between us and other Countries; or which is better the Price or Value of Bullion between them and us, will shew where the Balance lies; but to find out from whence it proceeds, and what Remedies to apply, we must come to an Enquiry of all the particular Sorts of Goods, and seek to suppress or lessen the Use of such as can be spared, or supplied from our own Produce.

Par of Exchange and Balance of Trade.

# S E C T. LXIX.

Above one hundred Years since, GERARD MALINES, a Man of great Knowledge in the Laws and Customs of Trade, as appears by his *Lex Mercatoria*, still in Use, was one of the Commission then appointed to enquire into the Nature of Exchange, and, if possible, to fix a certain Par, according to the intrinsic Value of the Coin in each Country, with whom *England* trades, who wrote

Author of *Lex Mercatoria*, his Presumption and Error.

Refuted by  
THOMAS  
MUNN.

several small Tracts on that Head, the Substance whereof is to be found in his said Book, (10) pretending to know several Mysteries in the Business of Exchange, and of great Mischiefs to be remedied by the King's Authority, in fixing a true *Par pro pari*, which no Merchant should exceed by Bills of Exchange. But another Merchant his Cotemporary, THOMAS MUNN, fully confuted him, and plainly evinced that there were not any such Mysteries in the Business of Exchange, nor any such Wonders to be performed by what he proposed. This Refutation was published under the Title of *England's Benefit and Advantage* by foreign Trade; and old as it is, will still be one of the truest and best Books on Trade extant, only making some Allowance for his Prejudice to the *Dutch*, which perhaps, at that Juncture, was not without some Reason.

DUTOT.

DUTOT, a late *French* AUTHOR, in a Book called *Reflexions Politiques* sur les FINANCES, which he wrote to prove what had been long before proved by RICE VAUGHAN, and since by Mr. LOCKE, That Monsieur MELON was in the wrong in his *Essai* sur le COMMERCE, maintaining it to be good Policy, to raise the Coin in *France*, when the Crown was greatly indebted. DUTOT then proceeds into an Enquiry concerning the Balance of Trade, and there loses himself in a Labyrinth of Calculations, to shew this Balance by comparing the Exchanges with the intrinsic Value of the Coins of each Country.

Examen of his  
Works.

One other *French* AUTHOR, in a Tract entitled *Examen* sur les Reflexions Politiques, pointed out several of his Errors, and evinced his Calculations to be of no Weight, as to the Balance of Trade; in which, if any thing was to be amended, it must be the Result of an Enquiry of what Goods were imported and exported, which is

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(10) Page 409, and the *Maintenance of Free Trade*, Pag. 16. He wrote besides a Treatise on the same Subject, entitled the *Canker of England's Commonwealth*; and one other entitled the *Centre of Trade*.

not sufficiently shewn. But in each of these *French* Authors, there are many Observations worthy a serious Attention.

S E C T. LXX.

When Sir ISAAC NEWTON had the Inspection of the *English* Mint, he made, by Order of Council, *Affays* of a great Number of foreign Coins, to know their intrinsic Values, and to calculate thereby the Par of Exchange between *England* and other Countries; of which a Table is given by Dr. ARBUTHNOT; and he says, you may thereby judge the Balance of Trade, as well as the Distemper of a Patient by the Pulse. And this, it seems, induced DUTOT to follow the same Path in calculating the *Par* of EXCHANGE, and by a Par simily, says, that the Balance of Trade may be thereby as well judged of as the Weather by a Barometer: But both these Similies, and both these Facts, are equally fallacious.

No doubt, but that under the Direction of so great a Man as Sir ISAAC, the utmost Accuracy has been observed in making these Affays, and the intrinsic Value of the Coins, as set down. However we find some small Difference in the Affays of the greatest Masters: And but lately by four Bars of Gold *assay'd* in *London*, and sent to *Amsterdam*, they turned out as follows.

At London.				At Amsterdam.			
Bars	100 oz.	1 a 22—0 $\frac{1}{4}$	Wt. 12 $\frac{5}{8}$ 4 $\frac{1}{2}$ a 22 0 $\frac{1}{4}$	Wt. 11 $\frac{24}{14}$ 7 $\frac{12}{14}$ 14 $\frac{24}{14}$			
	101 —	1—23—0 $\frac{1}{4}$ —	12 6 4 $\frac{1}{2}$ —23 1 $\frac{1}{4}$ —	12 7 2 17			
	10 —	5—22—3 $\frac{3}{4}$ —	1 2 6 $\frac{1}{2}$ —23 —	1 5 8 5			
	63 —	12—22—0 $\frac{1}{2}$ —	8 0 7 $\frac{1}{2}$ —22 1 $\frac{3}{4}$ —	7 10 2 11			
	274 oz. 19		34 6 3	Weight 32 13 8 23			
			8	a 355 F.—11563 6 —			
	274 $\frac{19}{100}$	—	278 $\frac{3}{100}$	Agio $\frac{3}{8}$ — 43 7 —			
	5499	—	5563	F.—11606 13 —			

which makes 100 Ounces in *London* to be 101  $\frac{911}{3499}$  Ounces in *Amsterdam*.

Consequently either at *London* or *Amsterdam*, there was a Want of Exactness. But to fix the true Par by the Coin of their respective Countries, no use should have been made but of Coins of an exact Weight, such as is by Law prescribed in each Country. And it appears by the different Weight of these several Rixdollars of the Empire, set down in the Table, that some of them have probably been worn off.

Formerly, they were not in general come to such an Exactness in coining as at present; for even quite new Pieces were a little more or less than Standard-weight.

*Spanish* Par.

In this Table stands first a Piastre of *Seville*, weighing 17 Penny-weight 12 Grains; whereupon the Par of Exchange is calculated. Then 1000 Piastrs in *London* should weigh 875 Ounces: But it is notorious that 1000 Piastrs in *Spain* go at 117 Marks 2 Ounces, and in *London* seldom turn out above 867 to 869 Ounces. The exact Weight of a Piastre in *Spain*, at present, is 15 *Adarmes*, and so 1000 weighing 117 Marks  $1\frac{1}{2}$  Ounces, will pass for full weighty in their Payments; whereby it seems to be clear, that the Piastre which Sir ISAAC NEWTON made use of, and calculated the *Par* by, has been over-weighty.

Or if it was a Piastre of an older Date, when out of a Mark of 8 Ounces, 11 Penny-weight, 4 Grains, were coined 67 Reals, and 8 made a Piastre, then 1000 Piastrs, full Weight, corresponded to  $119\frac{27}{87}$  Marks at *Cadiz*: And so as  $117\frac{1}{4}$  Marks at *Cadiz* makes  $867\frac{1}{2}$  Ounces at *London*, 1000 Piastrs, or 17,350 Penny-weight  $119\frac{27}{87}$  Marks correspond to 17 Penny-weight 16 Grains a Piastre, and then it was too light: But however it may have been, the *Spaniards* having since made Alterations in their Coin, the Par is not to be judged by the past, but by the present.

An old Dollar of *Hamburg* Bank-money stands in the Table 18 Penny-weight 9 Grains; and I have, by a Parcel of Gold sent from *London* to *Hamburg*, experienced that 1000 Marks of *Cologne*, correspond with 7510 Ounces at *London*.

At

At *Hamburg* the Bank-dollar must weigh exactly 2 Loot, or an <sup>HAMBURGH</sup> Ounce, which corresponds with 18 Penny-weight 18 Grains *London* <sup>Par.</sup> Weight: Whence it is evident, that the said Dollar, and by which the Par of this Table has been calculated, must have been under Weight.

Therefore, to make the Calculation of the *Par* quite exact, they should have procured with some Coins, a Set of Weights out of the respective Mints abroad, describing by the Law of the Country, how much of each Specie ought to go to the Ounce, Pound, or Mark, so as to be able to ascertain both the Difference of Weight and Fineness.

In the Book called the *European-STATES-CHANCELLERY*, which is yearly published, and contains all the Transactions of the Empire at the *Diet* of RATISBONNE, Part 71, we find that in 1738, there were Assays made of a great Number of Coins, by seven Assay Masters of the Empire, for that Purpose appointed; and upon a Resolution of the Diet, dated the 10th of *September*, 1738, it was directed to adjust all by the *Standard* of LEIPSIC, which is of <sup>IMPERIAL</sup> 14 Loot 4 Grains fine in a Mark of *Cologne* of 16 Loot, and 8 Rix- <sup>Standard.</sup> dollars to be a Mark, each Rixdollar 2 Loot, and to pass in *Germany* for 2 Guilders.

By the Assays it is noted in the said Masters Reports, that they found by a Parcel of Guineas from the Year 1698 to 1720, that they were of 22 Carats 1 Grain fine, and that  $28\frac{1}{2}$  Guineas, were equal to 1 *Mark* COLOGNE; consequently 1 Guinea worth 8 Florins 46 Kreuzer  $1\frac{11}{12}$  Penny-weight: Now if we calculate that a weighty Ducat, by the *Standard* of *Leipsic*, is worth 5 Florins *Amsterdam* Bank-money, which pass in the Empire for 4 Florins, then,

4 Florins.	5 Florins.
a 60 xrs.	a 20 Stivers.
As 240 xrs of the Empire is to 100 Stivers <i>Amsterdam</i> ,	
so 1 Guinea	
or 8 Florins, $46\frac{1}{2}$ xrs	
is worth $219\frac{1}{2}$ Stivers,	<i>Amsterdam</i>
$36\frac{1}{2}$ Shillings <i>Flemish</i> .	ditto Par,

And

And 21 Shillings *English* being  $36 \frac{1}{2}$  *Flemish*, then 1 Pound, or 20 Shillings Par in Gold, is  $34 \frac{9}{7}$  between *London* and *Amsterdam*.

But the main Question is, whether the said Masters were right in their Position, that  $28 \frac{1}{2}$  Guineas ought to weigh a *Mark COLOGNE*.

To discover which, we know in *England*, that by Law, there should be  $44 \frac{1}{2}$  Guineas in a Pound of 12 Ounces Troy, and so  $28 \frac{1}{2}$  Guineas must weigh  $7 \frac{61}{89}$  Ounces. Now if we admit  $7 \frac{61}{89}$  Ounces of *London* equal to 8 Ounces *Cologne*, then 100 Ounces *English* would be but  $104 \frac{64}{811}$  *Cologne*; by which I am convinced, that the Guineas of which they made use, were under Weight; because, by the following three Proofs made by myself, I have found 100 Ounces *English*  $106 \frac{8740}{11993}$ ,  $106 \frac{3960}{7310}$ ,  $106 \frac{894}{1301}$ .

FIRST, I received 40 quite new Ducats, coined at *Amsterdam*, 1745 and 46, and found them to weigh in *London* 4 Ounces  $9 \frac{1}{2}$  Penny-weight.

And as by the Ordinance of *Amsterdam*, 67 Ducats must weigh 8 Ounces *Cologne*; so 40 Ducats must weigh  $4 \frac{52}{87}$ ; consequently,

If  $4 \frac{9 \frac{1}{2}}{100}$  at *London* are  $4 \frac{52}{87}$ , then 100 at *Cologne*  $106 \frac{8742}{11993}$ .

SECOND, by a Parcel of Gold in Bar, sent from *London* to *Hamburgh*, I found 7510 Ounces *English*, to correspond with 8000 Ounces of *Hamburgh*; and so 100 Ounces must be  $106 \frac{3960}{7310}$ .

THIRD, by a Set of Weights, quite new, and tried at *Amsterdam*, which I had sent me to *London*, I found a *Mark Troy* from *Amsterdam* to weigh  $7 \frac{18}{80}$  Ounces Troy at *London*.

And so, if  $7 \frac{18}{80} = 8$ , then  $100 = 101 \frac{29}{79}$ .

And as in *Amsterdam* 19 Marks Troy are 20 Marks *Cologne*,

Then  $101 \frac{29}{79} = 106 \frac{894}{1301}$ , which sufficiently proves that the Guineas made use of by the *German* Mint-masters were too light, and therefore the Par above calculated, must exceed  $34 \frac{9}{7}$ .

To come nearer to the Truth, we admit  $106 \frac{1}{2}$  Ounces *Cologne* = 100 *English*, so  $8 = 7 \frac{100}{111}$ . Now, as 12 Ounces make  $44 \frac{1}{2}$  Guineas,  $7 \frac{100}{111}$  make  $27 \frac{2188}{3336}$ : Consequently, computing  $27 \frac{2188}{3336}$ , to weigh 67 Ducats,

$$\begin{array}{r}
 22 \frac{1}{11} \\
 \hline
 23 \frac{8}{11} ) 1479 \frac{7}{11} \\
 \hline
 27 \frac{2188}{3336} \quad 62 \frac{147}{333} \text{ Ducats} \\
 \quad \quad \quad a \quad 100 \\
 a \quad 21 \quad \quad \quad \hline
 \quad \quad \quad 6) 6252 \text{ Stivers} \\
 \hline
 \end{array}$$

If 585 are  $1042$  what 20 S. Sterling.

Makes  $35 \frac{1}{2}$ , the Par in Gold,

Which nearly agrees, when we reckon in lieu of  $28 \frac{1}{2}$  Guineas at 8 Florins 46 xrs, to be 249 Florins 51 Franks to be divided with  $27 \frac{2188}{3336}$ , it will appear that a Guinea in *Germany* is worth  $8 \frac{69016}{71200}$  Florins. And so if 4 Florins of the Empire are at *Amsterdam*

6) 100 Stivers, then  $8 \frac{69016}{71200}$  Florins

is  $16 \frac{2}{3}$  Shillings *Flemish*.

149

is a Guinea  $37 \frac{1}{3}$  S. *Flemish*.

If 21 s. is  $37 \frac{1}{3}$ , then 20 S.

The Par is  $35 \frac{1}{3}$  in Gold.

O

Or

Or calculate as follows.

100 Marks *English* = 106  $\frac{1}{2}$  Marks *Cologne*,  
 1 Mark *Cologne* = 265 Grain fine, or 22  $\frac{1}{12}$  Carat,  
 284 Grain fine = 1 Mark Ducat Gold,  
 1 Mark Ducat Gold = 1116  $\frac{2}{3}$  Shill. *Flem.* or 67 Ducats,

					a 100 Stiv.
200	4	—	—	213 71	
1		—	—	265	6)6700
284		—	—	1	
3		—	—	3350—67	1116 $\frac{2}{3}$ S.

1136	—	—	—	4757
				265
				23785
				28542
				9514

100 Marks	1260605
or 800 Ounces <i>English</i>	100 Marks
a 3 l. 17 10 $\frac{1}{2}$	1136)126060500

If 3115 l. Sterling are — — 110969 Sterling *Flemish*, then  
 1 l. Sterling is 35 s. 7  $\frac{1}{2}$  *Flemish*.

But as there seems some small Difference in the Assays made by the Mint-masters of the Empire, in calculating that 22  $\frac{1}{12}$  Guineas fine in a Mark *Cologne*, when in *England*, the Standard is 22 fine in a Pound Troy, then the Account of Par stands thus;

100 Ounces *English* = 106  $\frac{1}{2}$  Ounces *Cologne*,

a 22

24)2200

Fine 91  $\frac{2}{3}$

so if 100 contains 91  $\frac{2}{3}$  fine, 106  $\frac{1}{2}$

contain 97  $\frac{5}{8}$  fine.

And as fine Gold in *Germany* is of 288 Grains,

and Ducats of 284

you are to add the 4 Difference, or  $\frac{1}{71}$  is 1  $\frac{639}{7704}$

And so if 8 Ounces are 1116  $\frac{2}{3}$  S. — 99 Oz.

99 Oz.

13818  $\frac{3}{4}$  Shilling

And as 100 Oz. a l. 3 17 10  $\frac{1}{2}$

or 389  $\frac{3}{8}$  l. are 13818 S.

1 l. gives 35  $\frac{1325}{1113}$

Shillings *Flemish*, Par of the Exchange.

Now to calculate likewise the Par upon the Value that silver Coins bear against each other, between *England* and *Holland*,

Admit 100 Ounces *English* to 106  $\frac{1}{2}$  Ounces *Cologne*,

a 11  $\frac{1}{10}$  fine

12)1182  $\frac{3}{10}$

98  $\frac{41}{100}$  fine.

And as Ducatoons in *Holland* are of the Fineness of 14 Loet 16 or 268 Grains,

In fine Silver of 288

So if 268 — 288 — 98  $\frac{41}{100}$  Ounces,

gives Ducatoons 105  $\frac{1}{2}$  Ounces.

And as out of 8 Ounces in *Holland* are coined 7  $\frac{1}{4}$  Ducatoons,

a 60 Stivers, or 10 Shillings *Flemish*, Bank-money,

which for 7  $\frac{1}{4}$  make 72  $\frac{1}{2}$ ,

and 100 Ounces in *England* 8)7648  $\frac{3}{4}$

5  $\frac{1}{6}$

if 516  $\frac{2}{3}$  Shill. Sterling are

956  $\frac{3}{4}$  Sh. then 20 Sh. Sterl.

is 37  $\frac{1}{133}$  Shill.

Par of the Exchange in Silver.

which

which agrees very well with the Difference of our giving in *England* in Coin more Silver for Gold, than in *Holland*, viz.

In *England* Silver  $15 \frac{4495}{88200} = 1 \text{ Gold}$  } as shall be proved by  
 In *Holland* Silver  $14 \frac{80010}{134603} = 1 \text{ Gold}$  } and by.

And so if  $15 \frac{4495}{88200} - 14 \frac{80010}{134603}$ , then  $37 \frac{1}{133}$  will be as above,

the Par of 35 S.  $7 \frac{1}{2}$  in Gold.

### S E C T. LXXII.

The Question then is, whether the Par should be ruled by silver or gold Coin. Mr. LOCKE, in his *Considerations on Money*, says, “ I have spoken of silver Coins above, because that makes  
 “ the Money of Accounts, and Measure of Trade all through the  
 “ World ; for I think all Contracts are every where made, and Accounts kept in silver Coin, I am sure they are so in *England* and  
 “ the neighbouring Countries. Silver therefore, and Silver alone,  
 “ is the Measure of Commerce. Two Metals, as Gold and Silver, cannot be both the Measure of Commerce in any Country ;  
 “ because the Measure of Commerce must be perpetually the  
 “ same, invariable and keeping the same Proportion in Value and  
 “ in all its Parts.”

Mr. LOCKE's Discourse is certainly worthy the Attention of all who would have an adequate Idea of the Nature and Value of Coins, Interest and Exchange. But before he wrote, that is to say, in the Year 1623, there was a Tract of the same Purport done by Mr. RICE VAUGHAN, but not published until the Year 1655 ; and it may seem strange, that this fine Piece on the Subject has hitherto lain in Oblivion, and not even quoted by Mr. LOCKE.

DAVENANT makes Gold and Silver promiscuously the Measure of Commerce ; and I should think, that as in *England* Guineas are by Law to be accepted in Payment at 21 Shillings, as a Crown for five Shillings, the Measure is not fixed to Silver.

In *Germany*, some Payments are by Law established to be made in certain Sorts of silver Coin, such as *Hamburg* Bank-money, in Rixdollars of 14 Loot 4 Grains fine in a Mark, and of 2 Loot each; and there it may be said, that silver Coin is alone the Measure of Trade.

In *Portugal*, Gold is the chief Coin of the Country, and consequently there the Measure of Trade.

S E C T. LXXIII.

A Pound of Gold is, and will every where remain equal to a Pound of Gold; but you give in some Countries more Pounds of Silver for a Pound of Gold than in others; and likewise in *England* we at Times do the same; and so we may as well maintain the Pound of Gold to be the Value fixed, or unchangeable, and the Silver to be variable in its Value: But as a greater Value in Gold than in Silver is found all over *Europe*, and is a Metal more commodious for Dispersion, and has all the Requisites of Silver, with some Advantages, I should think it rather preferable to serve as the common Measure of Trade.

1 Pound of Silver is 3 : 2 : 0, or 744 Pence *English*,

1 Pound of Gold is 46 : 14 : 6, or 11214 Ditto.

11214 a 744 is as  $15\frac{5}{44}$  standard Silver to 1 Pound standard Gold; but as

1 Pound Gold of 24 Carats contains 22 Carats fine,

1 Pound Silver of 12 Ounces contains  $11\frac{2}{5}$  Ounces fine.

So 100 Pound Silver a  $11\frac{2}{5}$  contain  $92\frac{1}{2}$  Pounds fine,

100 Pounds Gold a 22 — —  $91\frac{2}{3}$

And as  $15\frac{5}{44}$  is = to 1

or 11214	=	744
a $92\frac{1}{2}$	a	$91\frac{2}{3}$

68200)1037295	=	68200
---------------	---	-------

In *England* we give  $15\frac{1}{6}\frac{1}{2}\frac{1}{2}$  Pound fine Silver for 1 Pound fine Gold.

p

In

In the Roman Empire is coined out of

1 Mark Silver 8 Rixdollars of 14 Loet 4 fine, each going for 2 Guilders, is 16 Grains,

1 Mark Gold 67 Ducats of  $23\frac{2}{3}$  Carat fine, each going for 4 Guilders, is 268 Grains;

Ergo  $16\frac{2}{3}$  Marks Standard Coin in Silver, go for 1 Mark Standard Coin in Gold.

And as 100 Marks Silver a  $14\frac{2}{3}$  contain  $88\frac{128}{144}$  fine,

100 Marks Gold a  $23\frac{2}{3}$  —  $98\frac{88}{144}$

and  $16\frac{2}{3}$  is = to 1

---

or 67 = 4

a  $88\frac{128}{144}$  a  $98\frac{88}{144}$

---

$5955\frac{80}{144}$  =  $394\frac{64}{144}$

---

857600 = 56800

Thus in the *Empire* the Mark  $15\frac{5600}{5955}$  fine Silver, 1 Mark fine Gold.

In *France*, Mr. DUTOT, in his *Reflexions sur les Finances*, Tom. I. Page 207 says,  $14\frac{2}{3}$  Silver is equal to a Pound of Gold. The Author of the *Examen* says, That as by the Edict of the 5th of *March* 1721, the Mark Silver was to pass for 80 Livres, and the Mark Gold for 1200, both to be of 11 Derniers fine; the Proportion then was 15 to 1. But by the Edict of 1726, the Mark Silver is established at 51, 3, 3, and the Mark Gold at 740, 9, 1, both of 11 Derniers fine, it makes the Proportion to be near  $14\frac{1}{2}$  to 1, and I find it to be  $14\frac{5803}{122179}$  to 1.

In *Spain* one Peso in Silver of  $10\frac{5}{8}$  Reals weighs equal to one Doubloon of 160 Reals, or 20 Pesos of 8 in Gold.

And

And as by the Affays made by the Mint-masters in *Germany*, we find their *Peso's* to be of  $14 \frac{2}{11}$ , and their *Dubloons* of  $21 \frac{2}{3}$  Finess Gold. *Vide States Chancellery*, Part 71.

So is in Gold N.  $3 = 21 \frac{2}{3}$  fine in 24 makes in 100 =  $90 \frac{2}{7}$ , pag. 543.

in Silver N. 14 —  $14 \frac{2}{11}$  fine in 16 — — 100 =  $90 \frac{2}{7}$ , pag. 549.

And as a *Spanish* Dollar of  $10 \frac{1}{2}$  Rials Silver equals in Weight to a Doubloon in Gold of — 160 Rials,

$$\text{so } 85 = 1280$$

1 Silver to  $15 \frac{5}{11}$  Gold.

In *Holland* 1 Mark *Cologne*  $7 \frac{1}{4}$  Ducatoons in Silver passes in Bank for 3 F.  $21 \frac{1}{4}$  Gilders,

1 Mark *Cologne* 67 Ducats in Gold pass in Bank  
a 5 F. 335.

so  $15 \frac{5}{11}$  Silver = to 1 Gold.

$$\text{or } 1340 = 87$$

and 100 Marks Silver a  $14 \frac{8}{9}$  fine  $93 \frac{1}{11}$

and 100 Marks Gold a  $23 \frac{2}{3}$  fine — —  $98 \frac{1}{11}$

$$124694 \frac{8}{11} = 8579$$

$$2244500 = 154425$$

Silver  $14 \frac{82550}{134425}$  to 1 Gold.

In *Germany* lately have been published two Tracts on Coin, the one by Mr. GRAUMAN, who endeavours to prove that in the Empire generally too much Silver is given for Gold; and that it having admitted the Standard of *Leipsick* hath not been well adjudged; upon which Notions it seems first in *Brunswick*, and now in *Prussia*, they are coining Silver and Gold, whereby they pretend to observe a better Proportion. The other Author, whose Name we know not, stands up for the Honour of the Princes, who approved the Standard of *Leipsic*, both furnishing the Publick with fine Arguments.

guments on this Subject. Mr. GRAUMAN, in his Calculations of the Proportions between the Gold and Silver of *England* and *Germany* exactly agrees with our Calculations above, before printed in the *German* Language; and it seems had acquired the best Informations: But now, upon looking farther into the Question, we find the following Method of calculating to be yet shorter.

In *England* 1 Pound fine Gold is  $1 \frac{1}{11}$  Pound Standard Gold, a 11214 Pence — 12233  $\frac{5}{11}$  Pence;

1 Pound fine Silver is  $1 \frac{13}{11}$  Pound Standard Silver, a 744 Pence — 804  $\frac{36}{11}$ .

*Ergo* 1 Pound fine Gold is  $15 \frac{205848}{981080}$  Pounds fine Silver.

In the *Empire* 1 Mark fine Gold is  $1 \frac{1}{7}$  Mark Standard Gold, a 268 Florins — 271  $\frac{5}{7}$ .

1 Mark fine Silver is  $1 \frac{1}{8}$  Mark Standard Silver, a 16 Florins — 18.

*Ergo* 1 Mark fine Gold is  $15 \frac{126}{1278}$  fine Silver.

In *Holland* 1 Mark fine Gold is  $1 \frac{1}{7}$  Mark Standard Gold, a 335 Gilders — 339  $\frac{5}{7}$ .

1 Mark fine Silver is  $1 \frac{10}{134}$  Mark Standard Silver, a  $21 \frac{3}{4}$  Gilders — 23  $\frac{100}{134}$ .

*Ergo* 1 Mark fine Gold is  $14 \frac{237744}{444744}$  Mark fine Silver. (11)

#### S E C T. LXXIV.

Now as by the above Calculations it is evident that *France* and *Holland* give more Gold for Silver than their Neighbours. We find the Reason why Silver Coin of their Standard and Weight cannot be preserved with them; for a *German* Mark Gold of about 268 Florins Value will be purchased in Ducats, at a half Mark Silver, which is about 8 Florins, or 3 *per Cent.* cheaper; therefore silver Coin from *Germany* will go to fetch Ducats or Gold from *Holland*. However, as both answer the Purpose of all Purchases, and

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(11) In *Amsterdam* 200 Ducatoons must weigh  $211 \frac{1}{2}$  Ounces Troy, and they are of  $11 \frac{1}{4}$  Penny in Fineness, it makes  $14 \frac{68240}{13130}$  Silver to 1 Gold.

so long as they circulate on a near Proportion, it seems not material to make any public Alteration.

But the Question may further be, in which we are most exposed, or if it be better to keep our Treasure most generally in Gold or Silver? To answer which, Enquiry should be made, whether from the Mines is raised most Gold or Silver in Value? And which is most made Use of not only in Coinage, but for various other Purposes? Upon which, by the general Appearance, it may be conjectured which is most plentiful; and thence how far it may be necessary or proper to lower the Gold in Coin.

In *Holland* formerly there was but  $12\frac{2}{3}$  fine Silver to 1 Gold, as appears by their Placart 1622, when it was evidently better to treasure up Silver than Gold; yet considering that both Gold and Silver are subject to rise and fall; and as we find by a Representation made by Sir RALPH MADDISON to the Parliament in 1665, *England* then giving but 13, and *France* 15 for 1, was a Cause of Complaint; and as in general both these Species lessen in Value, as they increase in Quantity more than other Commodities, and sometimes for the greater Facility, with which Gold is conveyed in Time of War, &c. is preferably esteemed. It seems better for a Country that is blessed with Store to treasure up both, and in order to their being of equal Import, to keep them up to an equal Standard with those Countries where we find there is the greatest Trade in either Bullion.

#### S E C T. LXXV.

To regulate the Balance of Trade, and to discover what is the true Par of Exchange between inter-commercial Nations, it seems rather that our Conclusions are to be form'd from the Prices of Bullion in them respectively, than from the intrinsic Value of the Coin. To what Purpose is it that I know that with *English* Crowns I can make an Exchange at *Amsterdam* worth 37 Shillings, if they are not to be got of full Weight in any Quantity, and who will bring *English* Crowns from *France* that produce in *England* only  $29\frac{1}{2}$  Pence for 3 Livres, when Guineas of 24 Livres

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pro-

produce 21 Shillings, that is  $31\frac{1}{4}$  Pence for 3 Livres; and I hope now our Bank-Directors know that standard Silver sells in Bullion at 5,  $5\frac{1}{4}$ , they will not suffer their Tellers to have the picking out of weighty silver Coin.

## S E C T. LXXVI.

The Knowledge of the intrinsic Value of the Coins of our Neighbours is very necessary; but if we only keep amongst ourselves a certain Standard whereby to calculate, we may by the increasing the Price of our Goods proportionably take in Payment whatever Coin of a lower Standard Foreigners will bring us; because we shall find that by exchanging our Goods, what will be sufficiently avoided by only publishing how much they are of less Value, and why in Taxes they are not to be accepted for more; and as to the rest, let Merchants judge for themselves, and Trade be left unconfined. *Vide* Section XXIX.

## S E C T. LXXVII.

The Princes in *Germany* who have not Mines, cannot make any Coins of the Imperial Standard, but only when they have Bullion transmitted to them, so as to coin 18 Florins out of a Mark; any other Sort of Coins, with more Alloy, no body is obliged to accept without their Dominions; so that whatever they charge too much upon them will fall on their own Subjects, and first upon them who are in that Prince's Service, as it will be first paid them for Wages.

Cap. 14. Upon which Subject I am pleased with the Expression of an *English* Author who wrote in 1667, a Book entitled, a *Treatise of Taxes and Contributions*: " Sometimes it hath happened, that States, " I know not by what raw Advice, have raised or embased their " Money, which in Truth amounts to no more than a Tax upon " such People unto whom the State is indebted, or a Defalcation of " what is due."

And

And in concluding the Chapter, " That raising, or debasing of  
 " Money, is a pitiful and unequal Way of taxing the People, and  
 " is a Sign that the State sinketh, and is accompanied with the Dis-  
 " honour of impressing a Prince's Effigies to justify an adulterated  
 " Commodity, and the Breach of public Faith, as is the calling a  
 " Thing what it is not."

There is the Summary of a remarkable Speech made in Council *Cottoni Post-*  
 the 2d of *September*, 2 *Car. I.* by Sir ROBERT COTTON on this *buma, Fol.*  
 Subject; " Estates stand *Magis fama quam vi*, as *Tacitus* saith of *Rome*.  
 285.

" Wealth is one essential Mark of a Kingdom's Greatness, and most  
 " apparent in the Measure and Purity of their Coins; while King-  
 " doms hold up their Glory and Greatness, they maintain their  
 " Standard; but when Necessity induces them to change the  
 " Standard, then, by Degrees the Majesty of Empires decay; and  
 " the Steps to such Decay are seen by the gradual Alteration of the  
 " Coin, as the Corruption of Money is a sure Symptom of a Con-  
 " sumption in the State."

In an Edict published by the King of *Prussia*, 1750, the Agree-  
 ment approved and entered into by the whole *Roman EMPIRE*  
 1737, not to deviate in *Coinage* from the *Standard* of *LEIPSIC*,  
 and for which many good Reasons are given in the Book called the  
*European State CHANCERY*, is by that Edict said to be, " one of  
 " the Causes from whence a great Evil arose, and why it was ne-  
 " cessary, to new coin a Quantity of Gold and Silver, in which a  
 " juster and better Proportion should be observed."

It cannot well be denied, that generally in Coin, more Silver is  
 given for Gold than in Bullion; consequently that it would in gene-  
 ral be better to have it so; for there is now the same Reason in *Eng-*  
*land* for reducing a Guinea from 21 S. to 20  $\frac{1}{2}$ , as there was in  
 1717, on Sir ISAAC NEWTON's Representation for reducing it  
 from 21  $\frac{1}{2}$  to 21 S. whose Representation and Assays of foreign  
 gold and silver Coin, as being founded on the Inquisition of so great  
 a Man, are hereunto annexed.

But

But as at present far the greater Part in Value of the Cash of the Kingdom and Treasure of the Bank is in Guineas, the lowering of them might occasion many Inconveniencies, nor does it appear that it would any Way increase the Stock of Coin in the Kingdom; because of either Sort, we shall never keep more than nearly what we want, and always prefer the being over-stocked with Goods, wherefrom more or less Profit is expected, than with Cash that gains nothing to the Nation.

If we consider *England* as indebted to Foreigners, it would not be well calculated, that for 1000 Pounds we received at  $952\frac{1}{2}$  Guineas at 21 S. to repay it with  $975\frac{1}{2}$  at  $20\frac{1}{2}$  S. Nor indeed can any Alteration be made in Coin which is not the Cause of some Injustice, and by comparing the *Exchange* upon *Breslau*, what it was before the new Coinage, and what it is now, it will readily evince where the first Burthen of his Majesty of *Prussia's* new Coin fell.

On the Point of finishing this Part, I met with a Book lately published, replete with judicious Maxims of Trade, written by Don GERONIMO DE USTARITA, a Member of his *Catholick* MAJESTY'S *Privy* COUNCIL; wherein he explains himself with great Tenderneſs on this Subject: He ſays, "That the Standard, Weight, " and other Circumstances of Coin, are ſo intimately connected " with Commerce, that no Perſon will be ſurprized, if this important Conſideration obtain a Place in this Work, though I ſhall " bearly repeat what others have written upon the Subject; nor " ſhall I ever preſume on my own Strength to tread this dangerous " Path, or offer my Opinion in reſpect to the Rules that ought to " be obſerved in the proportioning and coining of Money, which is " a very arduous and difficult Undertaking, even to thoſe who are " the beſt ſkilled in the Theory and Practice of it."

I ſhall give you what SAAVEDRA, that Prince of Chriſtian Politicians has obſerved and recommended in his 69th *Eſſay Ferro & Auro*, where after quoting the bad Conſequences which attended ſeveral of the *Spaniſh* Monarchs intermeddling with the Coin, he goes on

to say, "I dare not undertake a Reform of the *Coinage*, it is the Eye of  
 " the Republic, and shrinks at the gentlest Touch of the Hand, and  
 " our wisest Way is to leave it as it is, and not to depart from an-  
 " cient Usage; no Penetration or Foresight can be aware of the  
 " Injuries that result from Innovations in this Case, till Experience  
 " point them out; for as it is the Rule and Measure of all Trans-  
 " actions of Business, when this is disconcerted every body is a Suf-  
 " ferer, Trade is disordered, and the Commonwealth, as it were,  
 " out of itself.

" On this Account, it was a wise Step taken in the Kingdom of  
 " *Arragon*, after the Renunciation of PETER XI. to form an Oath,  
 " and oblige all their future Princes to take it before their Coro-  
 " nation, that they would not make any Alteration in their Coin.  
 " This is the Obligation of a Prince, as *Pope INNOCENT III.* wrote  
 " to the same *King PETER*, when that Kingdom was in Rebel-  
 " lion about it. The Reason is, the Prince is subject to the Law  
 " of Nations, and ought, as being Security for the public Faith, to  
 " take Care that there be not any Alteration in the current Coin,  
 " which may be made in either the Matter, Form, or Quality; nor  
 " can any Kingdom be under good Oeconomy where the Coinage  
 " is not pure and just: Whereupon I shall make two Remarks;  
 " *First*, that our Coinage will then be regular, and not liable to any  
 " Disadvantage, when there shall not be any higher Advance upon  
 " the intrinsic Value than the Charges of coining, and when the  
 " Quantity of Alloy in our Silver and Gold is the same as in other  
 " Nations. *Secondly*, that the Coin be likewise of the same Weight  
 " and Value, giving Leave also for foreign Money to be current,  
 " since it doth not really affect the Authority of a *Prince*, to let  
 " Money stamped with foreign Arms be current in his Kingdom,  
 " as that only shews the Weight and Value of the Metal."

Thus this great Man, in the Words of SAAVEDRA, strikes at  
 the Root of the Evil committed by his cotemporary Ministers in  
*Spain*; and gives in short the true Doctrine which ought to be fol-  
 lowed in respect of Coinage.

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S E C T.

## S E C T. LXXVIII.

In Countries where they raise Bullion from the Mines, Coinage is common; and it seems to be an Encouragement for the Labourers therein, to pay their Wages in fine new standard Coin: But in such Times as now, in the Year 1750, when *Spanish* Pieces of Eight are here at  $5, 5\frac{1}{2}$ , which is 5 a 6 *per Cent.* above our Standard, they being but of 10 Ounces  $17\frac{1}{2}$  Penny-weight fine, I think the Princes of *Germany*, who have Mines, would rather sell their Silver uncoined than turn it into Money on the Footing of the Imperial Standard; or if particular Circumstances require them to coin, they should keep it in their own Possession, or make a Profit by sending it Abroad on their own Accounts.

In *England*, the Master of the Mint receives  $1, 4\frac{1}{2}$  for coining a Pound Troy of Silver, out of which he pays Eight-pence to his Workmen; so that whatever silver Coin is thrown into the melting Pot again, is a Loss to the Government of  $2\frac{27}{114}$  *per Cent.*

For Gold he receives  $6\frac{1}{2}$  for a Pound Troy, which is  $\frac{1300}{1167}$ , or near  $\frac{2}{3}$  *per Cent.* Charges to the Government. *Vide* the Abstract annexed of the Indenture with the Mint-Master.

## S E C T. LXXIX.

Nations have at all Times thought themselves in Want of Money, and the same Opinion will remain though the Mines should produce double what they now do. But this is not so properly Want of Money as an unequal Distribution of it, and the continual lessening of its Value.

A *French* Author, who wrote in the Reign of LOUIS XIII. a Book entitled the *Denier ROYAL*, attempts to prove, that this King, with a Revenue of 3,600,000 Pounds, was not richer than his Predecessor SAN LOUIS, Cotemporary with HENRY III. of *England*, who had only 30,000 Livres.

DUTOR, before quoted, pursues the like Thought, comparing the Revenues of LOUIS XV. with those of his Predecessors, and  
con-

concludes him not so rich as any of them; calculating from the Increase in the Quantity of Gold and Silver, and Augmentation of the Coin; the Consideration whereof I refer to Sect. XIX. and XXV. That Wealth consists not merely in Gold and Silver, but in the Abundance of Stores for Use and Service.

Monfieur VAUBAN, in his Project of *Dixme Royale*, very justly remarks, " That the true Riches of a State consists not in the Quantity of Gold and Silver, but in the Abundance of Necessaries to support the Life of Man."

DAVENANT, in Answer to a Merchant, who wrote against him, observes, " That it is very difficult to define what may be truly called the Riches of a People; it has a Signification far more extensive: We understand that to be Wealth which maintains the Prince and the main Body of the People in Plenty, Ease, and Safety; we esteem that to be Treasure which, for the Use of Men, has been converted from Gold and Silver into Buildings and Improvements; at all Times convertible again into these Metals, as the Fruits of the Earth, Manufactures, foreign Commodities, Shipping, &c. We hold to be Riches what makes a People safe at Home and considerable Abroad, as do Fleets and naval Stores. We shall go yet further, and say, That maritime Knowledge, Improvements in all Kinds of Arts and Advantage in military Stock; as also Wisdom, Power, and Alliances are to be put into the Scale. Industry and Skill to improve the Advantages of Soil and Situation, are more truly Riches than the Possession of gold and silver Mines, which *Spain* sufficiently instances, whose Subjects are poor, and Governors impotent, with all the Wealth of the *West-Indies*. There may as well be too much as too little of this Kind of Treasure, if it be not turned to proper Uses, where all flows so fast in as to choak Industry; or where it is suffered to stagnate, it does more Hurt than good. No Sum that can be dug out of the Mines bears any Proportion to what may be raised by the whole Labour of a trading industrious People.

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*England* is certainly right to keep only to one Sort of Standard in all its silver Coin, and for smaller Divisions to make use of Copper, so that every Body knows what he receives; and by making use of Bank Notes, less exposed to Clippings and Filings than the People in *Germany*, which will not cease, though ever so much Alloy be put into the Coin. (12)

If we proceed, as of late Years in transporting a like Quantity of Silver to the *East-Indies*, and in the same Manner to increase its Use for such a Variety of Purposes, it is possible that it may be again at the Par of 12 a 1; and so all silver Coin that now exceeds that Value, be cast into the melting Pot again; but as the same Thing will happen to all, so as is said before, in respect to hoarding up Treasure, it may be proper to keep a Stock of both, but principally of *Silver*.

#### S E C T. LXXX.

In general it appears, that we have no Reason to envy our Neighbours the Possession of Mines, or their having most Money; nor does it materially concern us what Alteration they make in their Coins, as while it is held good Policy to execute Law and Justice, promote Industry, and not over-tax Skill and Labour, they will be chearfully studied and pursued, and the Stock of Gold and Silver increase.

Page 75.

'Tis not the having, or using, but the Abuse of Wealth, that can be the Cause of its doing any Mischief amongst us, as DAVENANT, in the second Part of his pre-quoted Remarks; " Kingdoms grown  
" rich by Traffic will unavoidably enter into a plentiful Way of  
" living, but so long as this is universal, when it is not splendid  
" Beggary, when the inferior Rank of Men have their Share, and

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(12) It may be necessary just to hint here at the Practice of many of those who keep Cash for others, who receive foreign Gold, and pay it out again by Tale, so far as the lighter Pieces extend, but reserve the full-weighty for Purposes they well understand, which may be further taken Notice of in the proper Place.

" Tillage, Labour, and Manufactures in the mean time go on well  
 " when Buildings and Farm Houses are still kept in good Repair;  
 " when People, less frugal than they should be, are notwithstanding  
 " able to pay their Taxes, and provide themselves with all  
 " Things necessary, in such a Nation some Ease and Luxury is rather  
 " the Sign and Effects of great present Wealth, than the Cause  
 " and Fore-runner of future Poverty.

" We in *England* are not tied up to the same strict Rules of Parsimony  
 " as our Rivals in Trade the *Dutch*; we are not so easily invaded,  
 " we have a large fertile Country, and a good native Product,  
 " so that the whole Public may grow rich, though the People consume  
 " more foreign Commodities, and are more luxurious, and it is not  
 " impossible but that our Industry would be less active, if it was  
 " not awakened and invited by some irregular Appetites, which are  
 " more easily found fault with than cured. A rich Soil is apt to make  
 " People idle, and therefore our Invention not so much exercised, if  
 " our Inclinations were not so strongly bent on exotic Vanities, the  
 " evil Consequences whereof are less to be apprehended when it appears  
 " by many Circumstances that the Nation increases in Wealth.

" It is, without doubt, prudent to impede the Excess of Luxury,  
 " but if it is grown too powerful or extensive for Remedy, the next  
 " Wisdom is to lay such a Foundation of Wealth, that the vain and  
 " expensive Temper of the People may not be destructive of the Public."

The same Author, in his Discourse upon Grants and Resumptions, concludes his Annotations upon the Revenues of the *Romans* thus:

" Now to recapitulate the Reasons of this great Peoples Ruin,  
 " their Luxury extinguished all Sense of Honour, and in its stead  
 " introduced irregular Ambition; Ambition brought on civil Wars,  
 " civil Wars made single Persons too considerable to remain in private  
 " Condition; so that the Foundation of their Destruction was laid  
 " in the same Century wherein *Cæsar* invaded their Liberties.  
 " However, they might have continued a powerful and flourishing  
 S " Nation

“ Nation for many Ages, if the succeeding Princes had imitated  
 “ either *Cæsar* or *Augustus* : Many of them assumed unlimited Au-  
 “ thority, and bad Emperors destroyed what their Predecessors had  
 “ constructed ; they seized on the Treasure laid by for urgent Oc-  
 “ casions ; they accounted the public Revenues as their own pecu-  
 “ liar Property, and squandered away amongst their Minions, what  
 “ should have supported the Dignity of the State : And when Pro-  
 “ fusion had reduced them to Necessity, they levied exorbitant  
 “ Taxes, and pillaged the remote Provinces : When those Provinces  
 “ were harassed and exhausted, they became weak and unable to  
 “ resist Invasions. In this naked and defenceless State the *Barba-*  
 “ *rians* seized on them, and became strong and powerful, carried  
 “ their Arms into *Italy*, and conquered *Rome* itself, the Head and  
 “ Seat of Empire.”

## S E C T. LXXXI.

Chap. 18.

It is justly observed by Mr. MUNN, in his *England's Treasure*,  
 “ That all Kind of Pomp is not to be avoided ; for if we should  
 “ become so frugal as to use but few or no foreign Wares, how shall  
 “ we then vent our own Commodities ? What will become of our  
 “ Ships, Mariners, Artificers, &c. Can we reasonably hope that  
 “ other Countries will trade for our Wares, without having or  
 “ bartering theirs ? This would prove a vain Expectation. It is  
 “ more safe to run the middle Course, by spending moderately,  
 “ which will purchase Treasure plentifully again. The Pomp of  
 “ Building, Apparel and the like, in the Nobility, Gentry, and  
 “ other able Persons, cannot impoverish the Kingdom, if it be done  
 “ with curious and costly Works upon our own Materials, and by  
 “ our own People ; it will maintain the Poor with the Purse of the  
 “ Rich.”

And BLUET, on *The Fable of the Bees*, remarks equally well,  
 that many Things are called Vices, which in Fact are not so.

S E C T.

## S E C T. LXXXII.

Of the many *English* Authors on the Subject of the Balance of Trade, I do not recollect to have met with any one who has observ'd, that a great Part of the Gold and Silver remitted to *England* from *Spain* and *Portugal*, is the Return of Goods from *Germany*, where against Bills of Exchange payable at *London* go to *Germany*; and the *Germans* cannot take all the Returns in Goods from *England*, so Part of the Bullion must be transmitted to them, without any Relation to the Balance of Trade between *England* and *Germany*, and whereout the *English* can only have the Profit of Freight, &c.

The next Remittance is to *Holland*; and what is not requisite to remain there, passes on to the Proprietors in *Germany*. Hence it appears that the true Balance of Trade is not to be adjusted by the Quantity of Bullion imported; nor can it be discovered by the Imports from or Exports to *Holland*, what is properly the Balance between the two Nations, as commonly in both Cases a Part of it is on the *Germans* Account.

DAVENANT, in his Reports to the Board of Trade 1711, representing our Trade with *Holland*, assigns a good Reason for remitting Bullion thither, which is the Sums they have in our Funds, which will be a constant Drain from and Weight against us in the Balance of Trade. *Vide* Sect. XXXI.

Sir GEORGE DOWNING, who wrote about the Year 1726, assigns another good Reason, *viz.* that for the naval Stores purchased in *Denmark* and *Sweden*, the Balance passes through the Hands of the *Dutch*; but neither of them seem to have observed that some of the Money must go, because it never did belong to *England*.

Sir JOSIAH CHILD, in his Annotations on the Difficulty of finding out the Balance of Trade, concludes, " That whereas we  
" find an Increase of Shipping and Trade, it is a certain Sign of the  
" general Balance being in our Favour; and of such Increase every  
" body

“ body is Witness.” And so now a-days, every Body who will examine how and with what Sort of Goods Ships going and coming from *Holland*, *Hamburg*, and *Bremen* are loaded, may be convinced that our Exports are of much superior Value than our Imports: And so, upon the Whole, the Balance is in our Favour.

Hence results these farther Considerations on the general Balance. *England* sends annually to the *East-Indies* 5 or 600,000 Pounds *Spanish* Silver, which is certainly more than what the Balance with *Spain* produces; and as likewise much goes into the *East* Country from us on Account of naval Stores, &c. and perhaps more is worked up at Home various Ways. This naturally leads us to enquire how it happens that we have so much of this Silver to spare, and brings us into the Circle of Trade.

There is, *primarily*, our own proper Balance immediately with *Spain*.

*Secondly*, our Balance of the *West-India* Trade principally by the Canal of *Jamaica*.

*Thirdly*, what we reserve out of the *German* Remittances, by Sale of native Products, and *East-India* Goods.

And, *lastly*, what we may reserve by remitting Gold instead of Silver, especially when Silver rises, which Gold has often been in part the Return for Silver exported by the Company, as well as from our Balance with *Portugal*.

As this pretty well accounts for the Manner of our coming by so much Silver; so if we consider that it is by the Course of that Trade brought partly in Value round to our Hands again, or the Means why we have so much to spare; and as the Company is supported besides to make an annual Export of 600,000 Pounds in Goods; and as it is to be considered, that if they did not carry on  
this

this Bullion Trade, it would be entirely in the Hands of the *French* and *Dutch*; so can there not be any just Cause of Complaint, on Account of the large Exportation of Silver.

The Quantity of Silver returned to *Spain* from the *West-Indies* yearly, is computed at — — — 12,000,000 Ds.  
which are nearly in Sterling Money 2,700,000 Pounds.

Supposed exported to the *East-Indies*,

By <i>England</i>	— —	£. 500,000
<i>France</i>	— —	500,000
<i>Holland</i>	— —	300,000
<i>Denmark and Sweden</i>		<u>200,000</u>
		1,500,000
Remains £.		<u>1,200,000</u>

Thus the *East-Indies* seems to swallow up above half the Silver of *America*, passing *Europe*-wise, besides what goes thither by the Channel of the *Manilas*; what becomes of the other half in the *European* Course, remains to be accounted for, which can only be done by observing, that it serves the Waste of Lace, Coinage, and working up into various Kind of Utensils, principally for all *Europe*. That the *English*, *French* and *Dutch*, remit great Quantities Eastward; that there is much used, and annually worked up and wasted in *Spain*, as well as in other Countries; and in *England* perhaps more than in *France* and *Spain* together. And although we have in *England* a great Circulation of Bank Notes, I am apprehensive that there is much more Silver now, than before the Bank was set up, taking wrought Plate and Coin together.

It is an Advantage, that as Silver increases, more Use is made of it in wrought Plate; for, was it all to be coined, such Coin in Pro-  
T portion

portion to its Increase, always loses in Value, in Respect to other Commodities; and as Gold likewise becomes more plentiful, *Europe* is under no Necessity of making any other Use of silver Coin than for the Convenience of small Divisions, which seems to be of late generally practised.

The Notion which some Persons entertain, that if the Bank of *England* would lend their Notes as cheap upon Silver as the Bank of *Amsterdam* does their Credit, most of the Silver of *Europe* would center here, to me appears a Mistake, and the contrary very clear; For as the *French*, who are Proprietors of the greatest Part of the Treasure coming from the *Spanish West-Indies*, have no Employment for much Money in *England*, if upon a fallacious Appearance, any Quantity of their Silver from *Spain* were shipped for *London*, the Exchanges between *Cadix*, *Paris*, and *London*, soon would turn so against the Shipper of Silver, that it could be of no Service, if the Bank would lend their Notes for Nothing; and in such Case the Silver must pass from *England* to *France* again at double Charges; as they have from many Quarters of *Europe* the largest Balance of Trade in their Favour, it must naturally draw the largest Quantity of Gold and Silver thither; and for Want of publick Credit, they always must keep a greater circulating Cash than is necessary in *England*: But in Proportion of the Number of People, visibly we have larger Properties amongst our private Persons, and can better depend upon the same.

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A FURTHER  
ILLUSTRATION  
OF THE  
BUSINESS OF EXCHANGES,  
FROM THE  
TABLE, REPRESENTATION, &c.  
OF  
SIR *ISAAC NEWTON*.

With Suitable REMARKS and ANNOTATIONS.

ILLUSTRATION  
OF THE  
BUSINESS OF EXCHANGES  
FROM THE  
TABLE REPRESENTATION  
OF  
SIR ISAAC NEWTON  
WITH CRITICAL REMARKS AND ANNOTATIONS

SIR ISAAC NEWTON'S *Affays, Weights and Values of most foreign Silver and Gold Coins, actually made at the Mint, by Order of the Privy Council, before the Year 1717; with Notes and Explanations, shewing the Methods of keeping Accounts in those Cities on which Negotiations in Bills are usually made; and a Calculation of the real or intrinsic Par of Exchange, as it stood in Anno 1719, when first published, and so as it was re-published in London 1740.*

### Foreign SILVER COINS.

	Affay.	Weight.		Stand. Wt.			Value.	
		dw.	dw. gr.	dw.	gr.	mi. d.		
<b>T</b> HE Piafter of Spain, or Seville Piece of 8 } Reals, now reduced to 10 * ————	W. 1	17	12	17	10	2	54	* This Piaftre proved Sect. LXXI. 10 have been over-weighty.
The new Seville Piece of Eight ————	W. 1½	14		13	21	15	43.11	
The Mexico Piece of Eight ————	W. 1	17	10½	17	8	14	53.83	
The Pillar Piece of Eight ————	Stand.	17	9	17	9		53.87	
The Peru Piece of Eight, coarser but of uncertain Allay								
The old Ecu of France, or Piece of 60 Sols Tournois —	W. 1	17	12	17	10	2	54	
The new Ecu, or Piece of 5 Livres, or 100 Sols —	W. 1½	19	14½	19	11	12	60.39	
N. B. The Ecu of France should be 2 dw <sup>t</sup> worse by Law								
The Crusado of Portugal, or Ducat worth 400 Reas } now marked and raised to 480 Reas ————	W. 2	11	4	11	1	13	34.31	
The Patacks, or Patagons of Portugal, worth 500 } Reas, now marked and raised to 600 ————								
The Ducatoon of Flanders, or Piece of 60 Sols or Patars	B. 4½	20	22	21	8	2	66.15	
The Patagon of Flanders, or Cross Dollar, or Piece of } 48 Patars ————	W. 12	18	1	17	1	13	52.91	
The Ducatoon of Holland, or Piece of 63 Stivers —	B. 3	20	21	21	3	15	65.59	
The Patagon Leg Dollar, or Rix Dollar of Holland, or } Piece of 50 Stivers ————	W. 14	18		16	20	17	52.28	
The three Guilder Piece of Holland, or Piece of 60 } Stivers ————	W. 2	20	8	20	3	12	62.46	
The Guilder Florin, or Piece of 20 Stivers ————	W. 2	6	18½	6	17	1	20.08	
The ten Shilling Piece of Zeland, or Piece of 60 Stivers	W. 2	20	6	20	1	13	62.21	
The Lion Dollar of Holland, or ⅔ of the Ducatoon —	W. 44	17	14	14	2	7	43.07	
The Ducatoon of Cologne ————	B. 3	20	18	21	—	15	65.02	
The Rix Dollar, or Patagon of Cologne ————	W. 13	18		16	22	14	52.53	
The Rix Dollar, or Patagon of the Bishop of Liege —	W. 12	17	22½	16	22	5	55.48	
The Rix Dollar of Mentz ————	W. 6½	18	8	17	19	18	55.27	
The Rix Dollar of Franckfort ————	W. 9	18	8	17	14	4	54.53	
The Rix Dollar of the Elector Palatine of the Rhine } and Bavaria before 1620. ————		18	5					
The Rix Dollar of Nuremberg ————	W. 6	18	10	17	22	1	55.55	

## Foreign SILVER COINS.

	Assay.	Weight.		Stand. Wt.				Value.
		dw.	dw. gr.	dw.	gr.	mi.	d.	
The old Rix Dollar of Lunenburg	W. 10	18	11	17	15	2		54.65
The old Rix Dollar of Hanover	W. 8	18	12	17	20	2		55.03
The double Gulden of the Elector of Hanover	W. 7	18	18	18	3	16		56.29
The Gulden of the Elector of Hanover, or Piece of $\frac{2}{3}$	B. $17\frac{1}{2}$	8	10	9	1	18		28.14
The half Gulden of the Elector of Hanover, or Piece of $\frac{1}{3}$	B. $17\frac{1}{2}$	4	5	4	12	19		14.07
The Gulden of the Duke of Zell, or Piece of 16 Gute Groshen	W. 43	11	2	8	22	10		27.07
The Gulden of the Bishop of Hildesheim, or Piece of 24 * Manen Grosh, now raised to 26	W. $40\frac{1}{2}$	11	22	9	17	17		30.21
The Rix Dollar of Magdeburgh	W. 10	18	12	17	16	1		54.27
The Gulden or Guilder of Magdeburgh	W. 44	11	14	9	6			28.67
The old Rix Dollar of the Elector of Brandenburg	W. 9	18	13	17	19	1		55.17
The old Gulden of Brandenburg, now raised from 24 to 26 * Manen Grosh	W. 43	12	4	9	19	9		30.41
The Gulden of Brandenburg, or Piece of $\frac{2}{3}$	W. 43	11	3	8	23	6		27.81
The half Gulden of Brandenburg, or Piece of $\frac{1}{3}$	W. 43	5	13	4	11	14		13.09
The Gulden of the Elector of Saxony, or Piece of $\frac{2}{3}$	W. 41	11	3	9	1	14		28.12
The old Bank Dollar of Hamburg *	W. 8	18	9	17	17	4		54.92
The old Rix Dollar of Lubec	W. $8\frac{1}{2}$	18	16	17	22	17		55.54
The four Mark Piece of Denmark of coarser Allay	W. 61	14	8	10	9	10		32.23
The four Mark Piece of Denmark of finer Allay	W. 27	11	$13\frac{1}{2}$	10	11	5		32.45
The eight Mark Piece of Sweden	Stand.	20		20				62
The four Mark Piece of Sweden	W. 58	13	12	9	23	7		30.92
The two Mark Piece of Sweden	W.	6	19					
The old Dollar of Dantzick	W. $10\frac{1}{2}$	18	9	17	12	4		54.27
The old Rix Dollar of Thorn near Dantzick	W. 12	18	$8\frac{1}{2}$	17	8	15		53.85
The Rix Dollar of SIGISMUND III. and VLADISLAUS IV. Kings of Poland	W. 10	18	9	17	13	14		54.04
The Rix Dollar of the late Emperor LEOPOLD	W. $10\frac{1}{2}$	18	9	17	12	4		54.27
The Rix Dollar of his Predecessor FERDINAND III.	W. $10\frac{1}{2}$	18	9	17	12	4		54.27
The Rix Dollar of FERDINAND, Archduke of Austria	W. $10\frac{1}{2}$	18	5	17	8	7		53.78
The Rix Dollar of Basil	W. $7\frac{1}{2}$	18	$18\frac{1}{2}$	18	3	6		56.24
The Rix Dollar of Zune	W. 13	18	1	16	23	13		52.65
The old Ducat of Venice, with the Words Ducatus Venetus upon it, a Piece of 6 old Livres, afterwards raised, I think, to 6 Livres 4 Sols de Picoli	W. $23\frac{1}{2}$	14	15	13	1	17		40.50
The half Ducat	W. $23\frac{1}{2}$	7	$7\frac{1}{2}$	6	12	18		20.25
The new Ducat, with the N° 124 upon it signifying 124 Sols, or 6 Livres 4 Sols de Picoli		18	2					
The half thereof		9	1					
The Crusado Croisat, or St. Mark of Venice, with the N° 140 upon it, signifying 140 Sols, or 7 Livres de Picoli		20	6					
The half Crusado of the same Form		10	3					
The quarter Crusado of the same Form		5	1					
Another Coin of Venice	W. 46	17	10	13	19	8		42.08
The Piece of two Jules	B. 6	3	15	3	17	7		11.05
The Ducat de Banco of Naples, or Piece of 5 Tarins, or 10 Carlins, or 100 Grains	W. 3	14	$0\frac{1}{4}$	13	1			40.43
The half Ducat	W. 3	7	$0\frac{1}{8}$	6	12	10		20.21
The Tarin, or fifth Part of the Ducat	W. 3	2	$19\frac{1}{4}$	2	14	12		8.09
The Carlin, or tenth Part of the Ducat	W. 3	1	$9\frac{1}{2}$	1	7	6		4.04

\* Maryen  
Groshen.

\* Maryen  
Groshen.

\* This is the  
Bank Dollar,  
Sect. LXXI.  
proved to  
have been un-  
der-weighty.

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## Foreign SILVER COINS.

	Assay.	Weight.		Stand. Wt.		Value.
		dw.	dw. gr.	dw. gr.	mi. d.	
The <i>Escudi Ecu</i> , or Crown of <i>Rome</i> , or Piece of 10 } Julios, or 100 Bayoches ————— }			20 14 $\frac{1}{2}$			
The <i>Teston</i> of <i>Rome</i> , or Piece of 3 Julios —————	W. 1	5	21 $\frac{1}{2}$	5 20 17		18.32
The <i>Ducat</i> of <i>Florence</i> and <i>Leghorn</i> , or Piece of 7 } Lires, or 10 $\frac{1}{2}$ Julios ————— }	B. 8	20	3	20 20 6		64.62
The <i>Julio</i> of <i>Rome</i> —————			2 5			
The <i>Piafter Ecu</i> , or Crown of <i>Ferdinand II.</i> Duke } of <i>Tuscany</i> ————— }	W. 1	17	12	17 10 2		54
The <i>Piafter Ecu</i> , or Crown of <i>Cosmus III.</i> present } Duke of <i>Tuscany</i> , whose Monies are about 4 per } Cent. lighter than those of his Father's; this Piece } is 8 $\frac{1}{2}$ Julios ————— }	W. 1	16	18	16 16 4		51.69
The <i>Croizat</i> of <i>Genoa</i> , or Piece of 7 $\frac{1}{2}$ Lires —————	B. 7	24	15	25 9 11		78.74
The <i>Ecu d'Argent</i> of <i>Genoa</i> , or Piece of 7 Lires 12 Sols			17 21			
The <i>Piafter Ecu</i> , or Crown of <i>Milan</i> —————			20 20			
The <i>Philip</i> of <i>Milan</i> , or Piece of 7 Livres —————			3 22			
The <i>Livre</i> , or 20 Sols Piece of <i>Savoy</i> —————			1 23			
The 10 Sols Piece of <i>Savoy</i> —————	B. 16 $\frac{1}{2}$	7	10	7 23 4		24.07
A <i>Roupee</i> —————	W. 75	12	19	8 11 5		26.26
A <i>Gout Gulden</i> , or <i>Florin d'Or</i> , a <i>Dutch</i> Coin of 28 Stiv.	W. 48	11	00	8 14 18		26.72
Another <i>Gout Gulden</i> —————	W. 48	12		9 9 15		29.15
Another —————						

N. B. All the Rixdollars of the Empire, if exact, ought to weigh in London 18 Penny-weight 18, and to be 8 $\frac{1}{3}$  Penny-weight worse than the English Standard.

## GOLD COINS Unworn.

	car.	gr.	dw.	gr.	dw.	gr.	mi.	s.	d.
THE old <i>Louis d'Or</i> —————	W. 0 0	$\frac{1}{2}$	4 8		4 7 8	16		9.3	
The half and quarter in Proportion —————	W. 0 0	$\frac{1}{4}$	2 4		2 3 14	8		5	
The new <i>Louis d'Or</i> —————	W. 0 1	$\frac{1}{2}$	5 5 $\frac{2}{3}$		5 3 18	20		0.6	
The half and quarter in Proportion —————	W. 0 1	$\frac{1}{4}$	2 14 $\frac{7}{10}$		2 13 19	10		0.3	
The old <i>Spanish</i> double <i>Doubleton</i> —————	W. 0 0	$\frac{1}{2}$	17 8		17 5 12	67		1.4	
The old <i>Spanish</i> double <i>Pistole</i> —————	W. 0 0	$\frac{1}{2}$	8 16		8 14 16	33		6.7	
The old <i>Spanish</i> <i>Pistole</i> —————	W. 0 0	$\frac{1}{2}$	4 8		4 7 8	16		9.3	
The new <i>Seville</i> double <i>Pistole</i> —————	W. 0		8 16 $\frac{1}{4}$						
The new <i>Seville</i> <i>Pistole</i> —————			4 8 $\frac{1}{6}$						
The half and quarter in Proportion —————									
The <i>Doppia Moeda</i> , or double <i>Moeda</i> of <i>Portugal</i> new } coined ————— }	W. 0 0	$\frac{1}{4}$	6 22		6 21 12	26		10.4	
The <i>Doppia Moeda</i> as they come into <i>England</i> —————	W. 0 0	$\frac{1}{4}$	6 21 $\frac{1}{4}$		6 21 7	26		9.9	
The <i>Moeda</i> of <i>Portugal</i> —————	W. 0 0	$\frac{1}{4}$	3 11		3 10 16	13		5.1	
The half <i>Moeda</i> —————	W. 0 0	$\frac{1}{4}$	1 17 $\frac{1}{2}$		1 17 8	6		8.5	
The <i>Hungary</i> <i>Ducat</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 7	9		3.6	
The <i>Ducat</i> of <i>Holland</i> , coined at <i>Legem Imperii</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	
The <i>Ducat</i> of <i>Campan</i> in <i>Holland</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	
The <i>Ducat</i> of the Bishop of <i>Bamberg</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	
The double <i>Ducat</i> of the Duke of <i>Hanover</i> —————	B. 1 2		4 10 $\frac{1}{2}$		4 17 9	18		4.8	
The <i>Ducat</i> of the Duke of <i>Hanover</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 8 18	9		2.7	
The <i>Ducat</i> of <i>Brandenburgh</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	
The <i>Ducat</i> of <i>Saweden</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	
The <i>Ducat</i> of <i>Denmark</i> —————	B. 1 2		2 5 $\frac{1}{2}$		2 9 3	9		3.2	

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## GOLD COINS Unworn,

	Affay.	Weight.			Stand. Wt.			Value.	
		car.	gr.	dw.	gr.	dw.	gr.	s.	d.
The Ducat of Poland	B. 1 2	2	5	2	8	12		9	2.1
The Ducat of Transylvania	B. 1 1	2	4 $\frac{1}{2}$	2	7	6		8	11.6
The Sequen, Chequin, or Zacbeen of Venice	B. 1 3	2	5 $\frac{1}{2}$	2	10	7		9	5.7
The old Italian Pistole	W. 0 0	4	6 $\frac{1}{2}$	4	6	11		16	7.6
The double Pistole of Pope URBAN, 1634		8	14 $\frac{1}{2}$						
The half Pistole of INNOCENT II. 1685		2	4						
A double Pistole of Placentia		8	10						
A double Pistole of Genoa, 1621		8	16						
A double Pistole of Milan		8	13 $\frac{1}{2}$						
A single Pistole of Milan		4	6 $\frac{1}{2}$						
A Pistole of Savoy, 1675		4	8 $\frac{1}{2}$						
Double Ducats of Castile, Genoa, Portugal, Florence, } Hungary, and Venice	B. 1 2 $\frac{1}{2}$	4	11	4	18	18		18	7.7
Single Ducats of the same Places	B. 1 2 $\frac{1}{2}$	2	5 $\frac{1}{2}$	2	9	9		9	3.8
Double Ducats of several Forms in Germany	B. 1 1	4	11	4	17	1		18	4
Single Ducats of the same Places	B. 1 1	2	5 $\frac{1}{2}$	2	8	5 $\frac{1}{2}$		9	2
Double Ducats of Genoa	B. 1 2	4	11	4	18	6		18	6.5
Single Ducats of Genoa, Besancon, and Zurich	B. 1 2	2	5 $\frac{1}{2}$	2	9	3		9	3.2
Pistole of Rome, Milan, Venice, Florence, Savoy, Ge- } noa, Orange, Treves, Besancon	W. 0 0	4	6	4	5	17		16	6.7
A Barbary Ducat, with Arabic Letters on both Sides in } square Tablets, without any Effigies or Escutcheon.	W. 2 1 $\frac{1}{2}$	2	16 $\frac{1}{4}$	2	9	6		9	3.5

N. B. The Gold Coins having been valued when Guineas were at 21 s. 6 d. they are here reduced to the present Standard of 21 s.

\* \* A Ducat of the Empire, if exact, ought to weigh 2 Penny-weight 5  $\frac{7}{16}$  Grains in London.

FOR understanding the Use of this Table, it is to be observed,

That the *English* Pound Troy contains 12 Ounces; 1 Ounce, 20 Penny-weights; 1 Penny-weight, 24 Grains; and 1 Grain 20 Mites.

The present *English* Standard for Gold Coin is 22 Carats of fine Gold, and 2 Carats, or  $\frac{1}{11}$  of Alloy.

The Silver Coin contains 11 Ounces 2 Penny-weight fine Silver, and 18 Penny-weight of Alloy in the Pound.

The first Column of the Table expresseth the Fineness of the assay'd Piece; the Letter B signifying *better*, and W *worse* than the *English* Standard.

The second Column, the absolute Weight of the Piece.

The third Column, its Standard Weight, or its Quantity of Standard Metal.

The fourth Column, its Value in *English* Money.

For Example, in the second Article of silver Coin, the new *Seville Piece of Eight* is  $1 \frac{1}{2}$  Penny-weight in the Pound worse than the *English* Standard Weight, 13 Penny-weight 21 Grains and 15 Mites of Sterling Silver; and is in Value  $43 \frac{11}{100}$  Part of a Penny. (1)

In the Royal Mint, a Pound of Standard Gold is cut or divided into  $44 \frac{1}{2}$  Parts, each a Guinea, at which Rate a Guinea will weigh 5 Penny-weight 9 Grains,  $.4382$  Parts.

They were first coined in King CHARLES II. Reign, and went for 20 Shillings, and had their Name from the Gold whereof they were, being brought from that Part of *Africa* called *Guinea*, which the Elephant on them likewise denotes.

By the *Par of Exchange* is meant, the precise Equality between any Sum or Quantity of *English* Money, and the Money of a foreign Country, into which it is exchanged, Regard being had to the Fineness as well as to the Weight of each.

And because this Paper may be of Use to others besides Merchants, who desire to know the State of our foreign Trade, or our Situation as to Transactions in Money with other Countries; seeing the Exchange with them, unless where Subsidies are paid to Princes abroad, Armies or Fleets maintained, or the Dividends of Sale of our Stocks belonging to Foreigners may have Influence; I say, the Course of Exchange indicates the State of our Commerce, *as truly as the Pulse does that of the human Body*. And for the Use of such Gentle-

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(1) 11 Oz. 2 is 222 — worse  $1 \frac{1}{2}$  d. remains  $220 \frac{1}{2}$ ; and so if 222 makes  $220 \frac{1}{2}$ , then 14 will make  $13 : 21 : 15$  at 62 d. for 20 is  $43 \frac{11}{100}$ .

men, there is here subjoined an Account (in those Countries, with whom we exchange) of the several Denominations in which Accounts are kept; as likewise the real Course of Exchange from CASTAIGN's Paper, as it stood *March 28, 1729.*

In HOLLAND, or the Seven United Provinces, Accounts are kept in Guilders, Stivers, and Pence, or Gros. 1 Guilder being equal to 20 Stivers, and 1 Stiver to 16 Penings, or 2 Gros, 6 of their Guilders they reckon equal to 1 Pound, or 20 Schillings *Flemish*; on which last, the Exchange betwixt *London* and those Countries is always computed, and not on the Guilder, though they are, by the above Account of the several Denominations, easily reduced one into the other. The real Species are the Rix Dollar, valued at 50 Stivers, the Ducatoon = 63 Stivers. But though this be the current Value of that Piece, it is received at the Bank of *Amsterdam* only at 60 Stivers, which makes the Difference, called *Agio*, really of 5 *per Cent.* between Bank and current Money.

The *Par of Exchange* between *English* and *Dutch* Money is easily found, thus, as by Sir ISAAC's Table, the Ducatoon of *Holland* is worth intrinsically 65 .59 *d. English*, which is received at the Bank, as has been already said, at 60 Stivers, or 3 Guilders, and consequently is equal to 10 Schillings *Flemish*; therefore by the Rule of Three, as 65 .59 *d. English* is to 10 *s. Flemish*, so is 240 *d. English*, to a 4th Number, which will be found to be 36 .59 *s. Flemish*, and so much Bank Money at *Amsterdam* should be received for 1 Pound, or 240 Pence Sterling: This is the real *Par*, and whatever is received more or less than this, is Gain or Loss to *England*.

In this and the other Calculations of the *Par*, Regard is had only to the coined Silver of the several Countries, and not to the accidental Price or Value that Silver in Bullion may be, for this never is long the same.

FLANDERS, or the Ten Provinces, Accounts are kept either as in *Holland*, or in Pounds, Schillings, and Pence *Flemish*; 1 Pound *Flemish* = 20 Schillings, and 1 Schilling = 12 Pence; the Rix Dollar here only 48 Stivers. In reducing the Money of this Country into that of *Holland*, you are to observe, that 1 Pound *Flemish*, as it is called, is = 6 Guilders; and of Consequence, 1 Schilling *Flemish* = 6 Stivers, or 12 Gros; 1 Stiver being = 2 Gros.

ANTWERP having been formerly the chief City of Trade of the whole seventeen Provinces, we exchange even upon *Holland* to this Day in *Flemish* Money. In some Parts of *Flanders* they divide the Shilling into Patars instead of Pence, 6 whereof go to a Shilling.

IN HAMBURGH, Accounts are kept in Marks *Lubsh*; a Mark is = 16 Schillings; a Schilling is = 12 Pence or Deniers; a Rix Dollar is = 3 Marks, or 48 Schillings *Lubsh*. But there is a Difference between Bank Money and *Hamburg* Currency. Bank Money is 16 *per Cent.* better. In Exchange for *London*, they give so many Schillings and Groot *Vlamish* for a Pound Sterling, 8 July 1744, 34 *sh.* 2 Groot *Vlamish*, which is Bank Money, and makes 12 Marks 13 *sh.* Banco.

LEGHORN. They keep their Accounts in Crowns of Gold, which is divided into 20 Solds, each Sold into 12 Deniers. A Crown of Gold, which they mark thus € is divided otherwise into 7  $\frac{1}{2}$  Liras; and a Dollar or Piafter of Exchange is = 6 Liras; a Ducat = 7 Liras.

VENICE. They have two Sorts of Ducats, one *Banque*, and the other *Courant*, the latter 20 *per Cent.* worse, or as the *Agio* rules, than those called Bank Ducats; each of them are divided into 124 Soldi, or 24 Gros, or 6 Liras 4 Sols, for they account likewise by Liras, Soldi, and Picoli, as we do in Pounds, Shillings and Pence;  
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so that they have two Sorts of Liras, though each divided in the same Manner; one *Lira di Gros* is = 10 Ducats. A Sequin being = 17 Liras, and worth, by Sir ISAAC's Table, 9 s. 5.7 d. Sterling: Say, if 17 Liras give 9 s. 5.7 d. what will 7 Liras 8 Soldi a Ducat of Bank give? Answer 49.492 d.

GENOA. Accounts are kept in Liras, Sols, and Deniers, summed by 20 and 12, as we do, which are reduced into Dollars or Piasters of 96 Sols.

IN FRANCE, Accounts are kept in Livres, Sols, and Deniers; 1 Livre is = 20 Sols, and 1 Sol = 12 Deniers.

In exchanging with that Country, we pay so many Pence Sterling for their Crown, by which Crown is always meant 3 Livres, or 60 Sols, though they have not always any coined Piece of Silver precisely of the Value of 3 Livres; therefore this ideal or nominal Crown is to be distinguished from the coined or real Piece of Silver, which passes likewise under the Name of a *Crown* or *Ecu*, but for Distinction Sake is called *un Ecu d'Argent*, or *Ecu blanc*, or *a Crown of so many Livres*; for this Crown in Specie may be double that of Account or Exchange, as it really happens to be at this Time; and consequently the Crown in Exchange is paid in *France* by the half of that real or specie Crown.

The Exchange between *France* and other Countries varies more than any other, owing to the frequent Alteration of their Coin, which is done by the King's Arret, wherein he declares and orders, how many Crowns in Specie or Livres, Sols, and Deniers are to be coined at his Mints out of the Mark, as they call it, or 8 of their Ounces of Silver; but this Mark is only 7 oz. 17 pwt. 12 gr. *English* Weight; which at 5 s. 2 d. is worth only 2 l. 0 : 8  $\frac{1}{4}$  Sterling. By the last Arret in *France*, 15 June 1726, the King orders, that there should be coined out of the Mark 8  $\frac{3}{8}$  Crowns, each

Crown to pass for 6 Livres, that is, the Mark, when coined, to pass for 50 Livres 5 Sols; from whence we have this Equation, that 50 Livres 5 Sols *French*, are intrinsically worth or  $= l. 2 : 0 : 8 \frac{1}{4}$ , from thence the *Par of Exchange* on the Crown or 3 Livres *French*; for if 50 Livres 5 Sols be  $=$  to  $l. 2 : 0 : 8 \frac{1}{4}$  *English*, 3 Livres *French* must be  $=$  to 29 .149 *d. English*, and whatever is paid more or less than this is Loss or Gain; and consequently, as the Course of Exchange then was, by the Account subjoined from CASTAIGN'S Paper, *France* had the Advantage of about 10 *per Cent*. This shews their Ignorance, who, in Books printed on this Subject, pretend to note the *Par of Exchange* with *France*, as if their Coin remained always the same; whereas there is no other Way than by an actual Assay, and weighing their Species at the Time, or seeing the King's Arret; and indeed that Exchange is so variable, that I have known it within the Space of but a few Years, from 5 *d. English* to near 60 *d.* for their Crown of 3 Livres; the first indeed was payable in their Bank-Notes, then in great Discredit, viz. *An. 1720*.

IN MADRID, CADIZ, SEVILLE, and all SPAIN, Accounts are kept in Maravides, 34 of which is  $=$  to a Rial, and 272 to a Piafter, or Piece of  $\frac{8}{3}$  Rials new Plate, or 10 of Vellon. The Pistole of Gold is  $=$  to 4 Pieces of  $\frac{8}{3}$ . A Rial of Plate is worth 34 Maravides of Plate, as a Rial of Vellon is worth 34 Maravides of Vellon; so that those two Terms of Plate and Vellon in *Spain*, not only signify the different Metals of Silver and Copper, but the Difference in Accounts of Money, for the Piece of  $\frac{8}{3}$ , which is only  $=$  272 Maravides of Plate, is  $=$  510 Maravides of Vellon; so they say a *Rial of Plate*, or a *Rial of Vellon*; a *Maravides of Plate*, or a *Maravides of Vellon*; though the last is only a small Copper Coin.

Another Observation to be made on the Exchange with *Spain*, is, the late Alteration in the augmenting their Specie; the Dollar or Piafter which formerly went for 8 Rials, being now raised to 10;

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so that *London* exchanging upon the Piece of Eight of 8 Rials on that Country still as formerly, the Alteration in the Course of Exchange should be in Proportion thus, if 10 Rials of Plate, or a Dollar, be worth 54 *d.* Sterling, what is 8 Rials worth? Answer 43 .2 *d.*

LISBON. Accounts are kept in Reas, whereof 1000 goes to what they call a Millrea, which is no real Coin but Money of Accounts; a Crusado of Silver is 480 Reas. But as most Payments are made in Gold, and few or none in Silver, the Moeda being worth only 26 s. 10 .4 *d.* the Rule to find the Par will be as follows, if 4800 Reas, for so many are in a Moeda, give 26 s. 10 .4 *d.* what will 1000, or one Millrea give? Answer, 5 s. 7 .166 *d.* which is near 2 *per Cent.* in our Favour.

The following TABLE needs no Explanation to Merchants; but, to such as are not, they are to be informed, that it is a Copy of a Paper usually printed twice a Week, by an eminent Exchange Broker, or by one who is daily informed by the several Dealers in Exchange, of the current Prices of the Monies of the several Countries we deal in with that Way, and is looked upon to be very exact.

2. There are different Ways among Merchants of negotiating Bills of Exchange, according to the Custom of the Countries abroad on which they are drawn; for Example, if a Bill is demanded on *Amsterdam*, *Rotterdam*, *Antwerp*, or any other of the Seventeen Provinces, or on *Hamburgh*, the Negotiation is always meant to be on the Pound Sterling; and then the Question, or Bargain to be made is, how many Schillings and Pence *Flemish* are to be received in those Parts for each Pound *Sterling*; and as this varies according to the Demand, and one receives sometimes more, sometimes less, it is termed by some Writers on this Subject of Exchange, giving the Certain for the Uncertain, though not so properly. On other Countries

tries it is the Reverse of this, for a Piece of a certain Value or Denomination is stipulated to be delivered abroad, and the Agreement to be made is, how much *English* Money is to be paid here for that Piece of foreign Coin; thus we exchange with *France* on their Crown or 3 Livres *Tournois*, with *Spain* on their Piece of Eight, with *Portugal* on their Milrea, &c. as may be seen in the Paper subjoined.

*Lastly*, It is to be observed, that the Value or Prices of *English* Money towards the Left-hand, are the Rates at which Bills were actually negotiated on the Exchange of *London* the Post-day of that Date; and that the Column towards the Right-hand is the Par, or intrinsic Value by which may be known at any Time which has the Advantage, this or the Country we exchange with.

Course of Exchange by CASTAIGN's Paper, 28 March, 1729, calculated upon Silver at 5s. 2d.					12 May, 1752.	
	<i>Flemish</i>	s.	d.	Par.	s.	
<i>Amsterdam</i>	34	.6	—	36	.59	—
<i>Rotterdam</i>	34	.7	—	36	.59	—
<i>Antwerp</i>	35	.3	—	35	.17	—
<i>Hamburg</i>	33	.7	—	35	.17	—
<i>English</i> d.					d.	
<i>Madrid</i> for a Piece of Eight	43	.5	—	43	.2	—
<i>Genoa</i> for a Dollar	—	—	54	.75	—	54
<i>Leghorn</i> for a Dollar	—	—	54	—	—	54
<i>Venice</i> for a Ducat of Bank	48	.62	5	—	49	.492
<i>Paris</i> for a Crown 3 Livres	32	.5	—	29	.139	—
<i>Lisbon</i> for a Millrees	—	—	66	—	67	.166
					s. d.	
					5	5 Price of Piaftres,
					5	6 Silver Standard.
					l. s. d.	
					3	18 1 Gold in Bars,
					3	18 2 Portugal Gold.

Thus far contains the Tables published 1729,  
from Sir ISAAC NEWTON's Assays.

## R E M A R K S.

ON a stricter Enquiry, I found, that at the Bank in *Amsterdam*, 200 new Ducatoons must weigh 26 Marks 3, 12  $\frac{1}{2}$ , which is 211  $\frac{1}{8}$  Ounces; and so if 101  $\frac{1}{8}$  at *Amsterdam* are 100 in *London*, then 211  $\frac{1}{8}$  will be in *London* 209  $\frac{2}{3} \frac{1}{9}$ . And so a Ducatoon, exact in Weight, must be 20 Penny-weight 22 Grains; and as they are coined at *Amsterdam* of 11  $\frac{1}{4}$  Penny fine, it will turn out 3 Penny-weight better than Standard, which agrees with Sir ISAAC's Assays, thus,

If 11 Oz. 2 are 11 Oz. 5, then 20 Dwt. 22 will be 21 Dwt. 4. 18  
Standard at 62 d.

and so 1 Ducatoon in *London* worth 67  $\frac{7}{100}$  Pence;  
And if 65  $\frac{7}{100}$  is 3 Florins — then 240, or 1 Pound Sterling,

60 Stivers

10 Shill. *Flem.* will be 36  $\frac{5}{100}$  Shillings *Flemish*,  
the Par between *London* and *Amsterdam*.

And the Difference in my Calculation to 37  $\frac{1}{3}$  Sh. Sect. LXXII. proceeds from the Ducatoons, the Assay in the *Empire* was made, of which 7  $\frac{1}{4}$  Ducatoons were reckoned in a Mark *Cologne*; and I find them to have been short in Weight, and better in Fineness than 14 Loot 16, as I calculated them to be: But, upon the Whole, as no Coin made in *England* may be exported, nor any Quantity of full-weighty *English* silver Coin is to be met with in *England*, the Course of Exchange governs itself not thereby, but rather by the *Portugal* Gold, or the Price of Silver and Gold in Bullion, as is set forth Sect. LXXV.

Merchants know that a Difference in the Exchange of five or six Groot, will make Gold and Silver go to and fro between *London*  
I and

and *Amsterdam*; but as is set forth, Sect. LXXXII. since a good Part of the Silver and Gold coming from *Spain* and *Portugal*, are the Returns for Goods from *Germany* sent thither, they have not always Occasion for taking it all in Goods from *England*; and so, in Course, Part of the same Bullion will often from *England* find its Way through *Holland* into *Germany*, and naturally the Exchange from *London* to *Amsterdam*, for most Times, must be under Par, so as to afford the Charges of sending over Bullion; and so in Reality, I observed it to have been, and you see by the above Course of Exchanges, it was in *Anno* 1729, and it is now; whereas, calculating the Par upon Gold, as Sect. LXXI. it renders 35 7 *d.* and the Course for *Amsterdam* at Sight is 35, of which Overplus of 7 Groot, we must deduct about  $1\frac{3}{4}$  Groot, that the Gold in Bars sells at present above the Standard Price upon which I calculated, and so there remains  $4\frac{3}{4}$  Groot, or  $1\frac{1}{8}$  per Cent. for the Charges of sending over Gold to *Holland*; which, after deducting the Freight, &c. will leave only a Profit, or Premium for the Risk of the Sea of about  $\frac{3}{4}$  per Cent. and in Effect we find, that the Exchange between *London* and *Amsterdam* seldom differs more from the real Par, calculated against the Prices of Gold or Silver in Bullion.

To calculate the true Par of the Exchange between *Cadix* and *London*, it must be done by the Piaftres, which continually come from thence; and there is now no Difference at all in the Fineness of them, which come from *Peru*, *Mexico*, or them which are coined in *Spain*, they are  $4\frac{1}{2}$  or 5 Penny-weight worse than *English* Standard, in Lieu of 1,  $1\frac{1}{2}$  Penny-weight which they were worse in Sir ISAAC's Time. If I remember right, it was in, or about the Year 1730, that the Court of *Spain* ordered to put in each Mark of Silver one Real more Alloy.

In *London*, in the Year 1746, I had 10,000 Ounces, or  $833\frac{1}{2}$  lb. of Pylar Dollars melted into 14 Bars, and found

7 = 403 lb. 1 worfe	5 dwt. 100: 9: 4: 18
7 = 423 lb. 1 5 —	4 $\frac{1}{2}$ — 95: 2: 7: 15
826 lb. 2. 5	826 lb. 2 5 —
off 17 7 17 2	11 $\frac{1}{8}$ ) 195: 11: 12: 9
	Allay 17: 7: 17: 2
808 lb. 6 7 22	Standard at 5 2 paid into
	the Bank of <i>England</i> , £. 2506 9 0
1 lb. 1. 15 — — —	Remainders drawn out
6 lb. — lost by melt-	of the melting Pot, af-
ing or Soil in	terwards made good at
it.	5 by the Melters — 3 8 5
833 lb. 4 Oz.	2509 17 5

And I paid for melting 14 Bars at 4 Sh.	£. 2 16 —
Affaying, a 6 d.	— — — 7 —
Two Mint-bills, a 1 S.—	— 2 — 3 5 0
	7. 2506 12 5

Which Assay on Pylar Dollars agrees very well with an Assay on *Mexico* Dollars from the Year 1734 to 1736, made by the Mint-Masters in *Germany* in the Year 1738, where they found them to be of  $14\frac{8}{18}$  Loat finer, and to go raw  $8\frac{5}{8}$  in a Mark of *Cologne* (*Vide* Part LXXII. of the *European States Chancellery*.) And whereas from repeated Experiences, I can ascertain that 1000 new-minted Piaftres at *London* generally weigh  $867\frac{1}{2}$  Oz. so a full-weighty Piaftre ought to be in *London* 17 dwt.  $8\frac{2}{5}$  gr. at 5 W. is 16 dwt. 23 gr. 1 mite; at 5 s. 2 d. is worth  $52\frac{35462}{44400}$  Pence. and as ever since the Year 1737, a Piaftre in *Spain* passes in current for  $10\frac{2}{3}$  Rials of Plate.

So

So if  $10 \frac{1}{8}$  is  $52 \frac{15462}{44400} d.$  then 8 Rials, or a Dollar in Exchange will be  $39 \frac{2847216}{1771000} \text{ Pence}$ , the true Par between *English* and *Spanish* silver Coin.

But it is to be observed, that when you sell Piaſtres in *London*, your Payments are made in Gold; ſo that it is Gold, or the Price which your *Spanish* Piaſtre ſells for in *London*, that rules the Exchange from *Cadiz*; and as at preſent  $867 \frac{1}{2}$  Ounces will ſell at 65 Pence, it turns out at  $56 \frac{187\frac{1}{2}}{1000}$  for  $10 \frac{1}{8}$  Rials, or  $42 \frac{5650}{100015}$  for 8 Rials; and when reckoned, the Charges of Liſenſe for exporting at *Cadiz*, Freight, Inſurance, it will hardly leave you 41 Pence, as at preſent comes the Exchange from thence. So near it is droven almoſt every where between the Courſe of Exchange and the Par, which reſults from ſending Bullion; and the Par or Differences deduced alone from the intrinsic Value of ſilver Coin in the foregoing Table, is now-a-days not of that Uſe as deſcribed.

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Sir *ISAAC NEWTON*'s Representation  
to the LORDS of the TREASURY.

**I**N Obedience to your Lordship's Order of Reference of *August* 12, that I should lay before your Lordships a State of the gold and silver Coins of this Kingdom, in Weight and Fineness, and the Value of Gold in Proportion to Silver, with my Observations and Opinion, and what Method may be best for preventing the melting down of the silver Coin; I humbly represent, that a Pound Weight Troy of Gold 11 Ounces fine, and 1 Ounce Alloy, is cut into  $44\frac{1}{2}$  Guineas; and a Pound Weight of Silver 11 Ounces 2 Penny-weight fine, and 18 Penny-weight Alloy, is cut into 62 Shillings; and according to this Rate, a Pound Weight of fine Gold is worth 15 Pounds Weight 6 Ounces 17 Penny-weight and 5 Grains of fine (2) Silver, reckoning a Guinea at 1 *l.* 1 *s.* 6 *d.* in silver Money. (3) But Silver in Bullion exportable, is usually worth 2 *d.* or 3 *d.* per Ounce more than in Coin. And if, at a Medium, such Bullion of standard Alloy be valued at 5 *s.* 4  $\frac{1}{2}$  *d.* per Ounce, a Pound Weight of fine Gold will be worth 14 Pounds Weight, 11 Ounces, 12 Penny-weight 9 Grains of fine Silver in Bullion. And at this Rate, a

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(2) 1 lb. fine Gold is  $1\frac{1}{11}$  Standard,

$44\frac{1}{2}$  Guineas.

a  $21\frac{1}{2}$  s.

956 $\frac{3}{4}$ s. is 1043 $\frac{8}{11}$ s.	—	—	—	—	} lb. 15 6 17 5
1 lb. fine Silver is $1\frac{18}{11}$ lb. Standard	—	—	—	—	
62 s. is 67 $\frac{3}{11}$	—	—	—	—	

(3) 17 $\frac{1}{8}$ , the 13th of *January*, the Guinea, by the King's Proclamation, was reduced to 21 Shillings.

Guinea is worth but so much Silver as would make 20 s. 8 d. When Ships are lading for the *East-Indies*, the Demand of Silver for Exportation raises the Price to 5 s. 6 d. or 5 s. 8 d. *per* Ounce, or above ; but I consider not those extraordinary Cases.

A *Spanish* Pistole was coined for 32 Real, or 4 Pieces of Eight Reals, usually called Pieces of Eight, and is of equal Alloy, and the 16th Part of the Weight thereof. And a Doppio Moeda of *Portugal* was coined for 10 Crusadoes of Silver, and is of equal Alloy, and the 16th Part of the Weight thereof; Gold is therefore in *Spain* and *Portugal* of 16 Times more Value than Silver of equal Weight and Alloy, according to the Standard of those Kingdoms; (3) at which Rate, a Guinea is worth 22 s. 1 d. But this high Price keeps their Gold at Home in good Plenty, and carries away the *Spanish* Silver into all *Europe*; so that at Home they make their Payments in Gold, and will not pay in Silver without a Premium. Upon the coming in of a Plate-Fleet, the Premium ceases, or is but small; but, as their Silver goes away and becomes scarce, the Premium increases, and is most commonly about 6 *per Cent.* which being abated, a Guinea becomes worth about 20 s. 9 d. in *Spain* and *Portugal*.

In *France*, a Pound Weight of fine Gold is reckoned worth 15 Pounds Weight of fine Silver: In raising or falling their Money, their King's Edicts have some Times varied a little from this Proportion, in Excess or Defect; but the Variations have been so little, that I do not here consider them. (4)

By the Edict of *May*, 1709, a new Pistole was coined for 4 Lewises, and is of equal Alloy, and the 15th Part of the Weight thereof, except the Errors of their Mints. And by the same Edict

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(3) A *Spanish* Pistole now is 40 Rials, and the Proportion between Gold and Silver, as explained Sect. LXXIII.

(4) The Proportion how it is now, you find explained Sect. LXXIII.

fine Gold is valued at 15 Times its Weight of fine Silver ; and at this Rate a Guinea is worth 20 s.  $8\frac{1}{2}$  d. I consider not here the Confusion made in the Monies in *France* by frequent Edicts, to send them to the Mint, and give the King a Tax out of them ; I consider the Value only of Gold and Silver in Proportion to one another.

The Ducats of *Holland* and *Hungary*, and the *Empire*, were lately current in *Holland* among the common People in their Markets and ordinary Affairs, at 5 Guilders in Specie and 5 Stivers, and commonly changed for so much silver Monies in 3 Guilder-pieces, as Guineas are with us for 21 s. 6 d. Sterling ; at which Rate a Guinea is worth 20 s.  $7\frac{1}{2}$  d.

According to the Rates of Gold to Silver in *Italy*, *Germany*, *Poland*, *Denmark* and *Sweden*, a Guinea is worth about 20 s. 7 d. 6 d. 5 d. or 4 d. for the Proportion varies a little within the several Governments in those Countries. In *Sweden* Gold is lowest in Proportion to Silver ; and this has made that Kingdom, which formerly was content with Copper-money, abound of late with Silver, sent thither (I suspect) for naval Stores.

In the End of King WILLIAM's Reign, and the first Year of the late Queen, when foreign Coins abounded in *England*, I caused a great many of them to be assayed in the Mint, and found by the Assays, that fine Gold was to fine Silver in *Spain*, *Portugal*, *France*, *Holland*, *Italy*, *Germany*, and the *Northern Kingdoms*, in the Proportions above-mentioned, Errors of the Mint excepted.

In *China* and *Japan*, 1 Pound Weight of fine Gold is worth but 9 or 10 Pounds Weight of fine Silver ; and in *East-India* it may be worth 12. And this low Price of Gold in Proportion to Silver, carries away the Silver from all *Europe*. (5)

So

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(5) Till about the Year 1732, we know of great Quantities of Silver going from *Europe* to *China*, to fetch Gold back, which has caused the Price of Gold in *China* to

So then, by the Course of Trade and Exchange between Nation and Nation in all *Europe*, fine Gold is to fine Silver as  $14 \frac{4}{5}$ , or 15 to 1; and a Guinea at the same Rate, is worth between 20 s. 5 d. and 20 s. 8  $\frac{1}{2}$  d. except in extraordinary Cases, as when a Plate-Fleet is just arrived in *Spain*, or Ships are laden here for the *East-Indies*, which Cases I do not here consider. And it appears, by Experience, as well as by Reason, that Silver flows from those Places, where its Value is lowest in Proportion to Gold, as from *Spain* to all *Europe*, and from all *Europe* to the *East-Indies*, *China* and *Japan*; and that Gold is most plentiful in those Places in which its Value is highest, in Proportion to Silver, as in *Spain* and *England*.

It is the Demand for Exportation which hath raised the Price of exportable Silver about 2 d. or 3 d. in the Ounce, above that of Silver in Coin, and hath thereby created a Temptation to export or melt down the silver Coin, rather than give 2 d. or 3 d. more for foreign Silver; and the Demand for Exportation arises from the higher Price of Silver in other Places than in *England*, in Proportion to Gold; that is, from the higher Price of Gold in *England* than in other Places in Proportion to Silver, and therefore may be diminished by lowering the Value of Gold in Proportion to Silver. If Gold in *England*, or Silver in *East-India*, could be brought down so low as to bear the same Proportion to one another in both Places, there would be here no greater Demand for Silver than for Gold to be exported for *India*; and if Gold were lowered only so as to have the same Proportion to the silver Money in *England* which it has to Silver in the rest of *Europe*, there would be no Temptation to export

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rise so much, that it is now not worth sending farther any Silver there; and upon the whole, so far as we received Gold back, it has been but exchanging one Treasure for another; and I consider the *Chinese* hath only the better in what Silver they gave us Goods, and not Gold for.

Silver

Silver rather than Gold to any other Part of *Europe*. And to compass this last, there seems nothing more requisite than to take off about 10 *d.* or 12 *d.* from the Guinea, so that the Gold may bear the same Proportion with the silver Money in *England*, which it ought to do by the Course of Trade and Exchange in *Europe*: But if only 6 *d.* were taken off at present, it would diminish the Temptation to export or melt down the silver Coin; and by the Effects would show hereafter better, than can appear at present, what further Reduction would be most convenient for the Public.

In the last Year of King WILLIAM, the Dollars of *Scotland* worth about 4 *s.* 6  $\frac{1}{2}$  *d.* were put away in the North of *England* for 5 *s.* and at this Price began to flow in upon us. I gave Notice thereof to the Lords Commissioners of the Treasury, and they ordered the Collectors of Taxes to forbear taking them, and thereby put a Stop to the Mischief.

At the same Time the Lewidores of *France*, which were worth but 17 *s.* 0  $\frac{1}{4}$  *d.* a-piece, passed in *England* for 17 *s.* 6 *d.* I gave Notice thereof to the Lords Commissioners of the Treasury, and his late Majesty put out a Proclamation, that they should go but at 17 *s.* and thereupon they came to the Mint, and 1,400,000 *l.* were coined out of them; and if the Advantage of 5  $\frac{1}{4}$  *d.* sufficed at that Time to bring into *England* so great a Quantity of *French* Money, and the Advantage of three Farthings in a Lewidor to bring it to the Mint, the Advantage of 9  $\frac{1}{2}$  *d.* in a Guinea, or above, may have been sufficient to bring the great Quantity of Gold which has been coined in these last fifteen Years, without any foreign Silver. (6)

Some

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(6) As *France* always had the Balance of Trade with *England* on their Side, these 1,400,000 *l.* Lewidores apparently came for fetching Silver, and cannot be considered as to have been of any Advantage to *England*. It is no Wonder, that the Advantage of 3 Farthings in a Lewidor should bring them into the Mint in *England*, since

Some Years ago, the *Portugal* Moedors were received in the West of *England* at 28 s. a-piece; upon Notice from the *Mint*, that they were worth only about 27 s. 7 d. the Lords Commissioners of the Treasury ordered their Receivers of Taxes to take them at no more than 27 s. 6 d.

Afterwards, many Gentlemen in the West sent up to the Treasury a Petition, that the Receivers might take them again at 28 s. and promised to get Returns for this Money at that Rate, alledging, that when they went at 28 s. their Country was full of Gold, which they wanted very much: But the Commissioners of the Treasury considering, that at 28 s. the Nation would lose 5 d. a-piece, rejected the Petition. And if an Advantage to the Merchant of 5 d. in 28 s. did pour that Money in upon us, much more hath an Advantage to the Merchant of 9  $\frac{1}{2}$  d. in a Guinea, or above, been able to bring into the *Mint* great Quantities of Gold without any foreign Silver, and may be able to do still, till the Cause be removed.

If Things be let alone till silver Money be a little scarcer, the Gold will fall of itself; for People are already backward to give Silver for Gold, and will, in a little Time, refuse to make Payments in Silver, without a Premium, as they do in *Spain*; and this Premium will be an Abatement in the Value of the Gold: And so the Question is, Whether Gold shall be lowered by the Government, or let alone till it falls of itself, by the Want of silver Money?

It may be said, that there are great Quantities of Silver in Plate, and if the Plate were coined, there would be no Want of silver

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since he who brought it in was at no Charges; and what he received back thereby became to be the Coin, which no body could refuse to take: But it is a Question with me, if such *French* Coin, exact in Weight, might not as well have been suffered to circulate for its full Value of 17 s. and 3 Farthings a-piece, than to proclaim them to pass not above 17 s. which would have saved the Government about 9000 l. Charges of minting.

Money: But I reckon that Silver is safer from Exportation in the Form of Plate, than in the Form of Money, because of the greater Value in Silver and Fashion together; and therefore I am not for coining the Plate, till the Temptation to export the silver Money, (which is a Profit of 2 *d.* or 3 *d.* an Ounce) be diminished: For as often as Men are necessitated to send away Money for answering Debts abroad, there will be a Temptation to send away Silver rather than Gold, because of the Profit which is almost 4 *per Cent.* And for the same Reason, Foreigners will chuse to send thither their Gold rather than their Silver.

All which is most humbly submitted to your Lordships great Wisdom.

*Mint-Office,*  
Sept. 21, 1717.

ISAAC NEWTON.

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ABSTRACT of the Indenture between his  
MAJESTY and the MASTER and WORKER of the *Mint*.

**T**HE KING, by Indenture under the Great Seal, confirms the Office of Master and Worker of the *Mint* to *A. B.* during Pleasure; and he is to receive all the Monies appointed by Acts of Parliament, for defraying the Expence of the *Mint*.

*A. B.* covenanteth to make the Money in Manner following, *viz.*

To make five Sorts of Money of Crown Gold.

1. The quarter Guinea, Value 5*s.* 3*d.* at 178 in the Pound Weight Troy: This not to be coined but by his Majesty's, or the Treasury's special Direction.

2. Half Guinea, Value 10*s.* 6*d.* at 89 in the Pound Weight.

3. The Guinea, Value 21*s.* at 44, and the Weight of 10*s.* 6*d.* to the Pound Weight.

4. The Double Guinea, Value 42*s.* at 22, and the Weight of 10*s.* 6*d.* in the Pound.

5. The Five Guinea Piece, or 5*l.* 5*s.* at 9, wanting the Weight of 10*s.* 6*d.* in the Pound.

Every

Every Pound Weight Troy of Gold, to be in Value 46 *l.* 14 *s.* 6 *d.* in Fineness at the Trial, 22 Carrats of fine Gold, and 2 Carrats of Alloy : This to be the Standard of Gold.

The Master to have 6 *s.* 6 *d.* for the Coinage of every Pound Weight Troy of gold Monies ; out of which he is to pay unto the Moniers 3 *s.* for their Labour for every Pound Weight.

If the gold Money be not continually made, according to the right Standard, but in Default of the Master, it shall be found sometimes too strong, or too feeble, by too much or too little in Weight, in Fineness, or both, the 6th Part of a Carrat in a Pound, which shall be called Remedy for the Master, the Money shall be delivered for good.

But if Default be over the 6th Part of a Carrat, the Deliverance shall cease, and that Money adjudged less than good, and be new molten, and re-coined at the Charge of the Master, till it be put to point as Money deliverable.

Excepting only the quarter Guineas ; for these Pieces not being able to be sized with the same Exactness as the larger Pieces of Gold may be, there shall be added to the said Remedy in Weight, half a Grain for every four quarter Guineas in the Pound Weight of the Monies tried.

These Defaults must happen by Casualty, or else no Allowance for them.

The Gold is to be coined in such Pieces, as his Majesty, by his Sign manual, shall direct.

The Master to make Eight Pieces of Silver Monies, *viz.*

1. The

1. The Crown at 5 s. and 12 of them, and 2 s. in the Pound Weight.

2. Half Crown at 2 s. 6 d. and 24, and 2 s. in the Pound.

3. The Shilling, at 12 d. and 62 to the Pound.

4. Half Shillings, at 6 d. and 124 in the Pound.

5. The Groat, or 4 d. and 186 in the Pound.

6. The Half Sixpence, or 3 d. at 248 in the Pound.

7. The Half Groat, or 2 d. at 372 in the Pound.

8. The Penny, 744 in the Pound.

The Pound Weight of Silver to be 3 l. 2 s. and shall be in Fineness at the Trial 11 Ounces 2 Penny-weight, and 18 Penny-weight of Alloy, which is the old right Standard of the Monies of *England*.

The Gold Money is to be made agreeable in Fineness to the indented Trial-pieces made by Direction of K. JAMES II. *Anno quarto Reg. sui*, and all Monies of Standard Silver, agreeable in Fineness to the respective Trial-pieces made 1 GEO. II. which Trial-pieces remain in six several Places, *viz.* in the Treasury, with the Warden of the *Mint* in the Tower, the Master and Worker, the Wardens of the Company of *Goldsmiths*, in *Goldsmiths-Hall*, in the Exchequer of *Scotland*, and with the General and other Officers of the *Mint* in *Scotland*.

The Master to have 1 s. 4  $\frac{1}{2}$  d. for Charges of coining every Pound Weight Troy of silver Monies, of which he is to pay 8 d. for every Pound Weight to the Moneyers.

The Master is to pay to the Warden of the *Mint* 1470 *l. per Annum*, for the Fees and Salaries of the respective Officers of the *Mint*.

The Remedy for the Master in the silver Money is, when on Assay before Delivery, the Money is found too strong or too feeble, all only in Weight, or all only in Fineness, or in both, by 2 Penny-weight in the Pound Weight Troy, after the old Computation of 20 Penny-weight in the Ounce. And if Default be over the said 2 Penny-weight, the Money shall cease to be delivered, and be re-coined at the Charge of the Master.

The Master may receive, as well his Majesty's Bullion of Gold and Silver, as the Bullion of any other Persons whatsoever, to be coined as aforesaid, delivering to the Parties bringing the Bullion, Bills testifying the Weight, Fineness and Value thereof, with the Day and Order of its Delivery into the *Mint*.

The Warden and Comptroller of the *Mint*, and his Majesty's chief Clerk, and Clerks of the Papers, for the Time being, shall enter in Ledger-books, all Bullion as shall be brought into the *Mint*; which Entry shall comprehend the Weight, Fineness and Value of the said Bullion, the Parties Names who brought it, and what Day. And then the Bullion is to be put in a Chest or Room, locked with three Keys, one of which is to be kept by the Warden, another by the Master, and the third by the Comptroller, and to remain there till delivered for Coinage.

The Warden, Comptroller, and his Majesty's Clerk, shall keep several Books of melting, declaring in the same, the Quantity and Fineness of all Gold and Silver, and Alloy put into the Melting, with the Report of every Assay, called the Pot-assay; and the said Books shall remain to charge the Master withal, and they shall be  
monthly

monthly subscribed and figured by the Warden, and the Master and Comptroller.

The Assay-master shall keep a Book of all Bullion brought into the *Mint*, whereby the Quantity and Fineness may appear, with the Report of the Assay of every several Pot, commonly called the Pot-assay, which shall be made of some Ingot of the said Bullion, to be taken by the Warden, Comptroller, and Assay-master, or any two of them, after the Pot is cast out.

If any happen to bring into the *Mint*, Gold or Silver nigh to the Standard aforesaid, the Master shall receive it for the Value accordingly, so as the Charges to make it agreeable to the Standards aforesaid, be borne by his Majesty.

The Master impowered to put such privy Mark on the Edges of gold and silver Coin, from Time to Time, as he shall think convenient.

The Warden and Comptroller, or their Deputies, are to over-see and survey the assaying, melting, fizing, and making of the gold and silver Monies, and to see the Balances and Weights always amended, and put to point.

The Surveyor of the Meltings shall keep a Book, containing the Weight of Gold and Silver as shall be molten, with the Alloy put into the same.

When the Monies be coined and compleat, the Warden, Master, and Comptroller, shall put them into a Chest or Room, locked with three Keys, one of which is to be kept by each of them, until Proof and Trial be had of the said Money, and Payment be made to the Bringers-in of the Bullion.

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The Proof to be made before Deliverance, by the Assay-master, in Presence of the Warden, Master, and Comptroller : And, being made, a Portion of the said Monies shall be taken and put into a Box by the Warden or his Deputy, in the Presence of the Comptroller and Master, or their Deputies ; whereof the Assay shall be made, before his Majesty, or such of his Council as shall be appointed by him at *Westminster*, or elsewhere, as he or his Council shall think fit, *viz.*

For every Journey Weight of Gold, not exceeding 15 Pound Weight two Pieces, whereof the one to be for the Pix, and the other for the Assay.

Out of every Journey of silver Monies, containing 60 Pounds Weight two Pieces, at least, the one Moiety thereof to be given for the Pix, and the other for the Assay.

They shall be sealed with the Seals of the Warden, Master, and Comptroller, and the Box shall be shut with three Keys, which shall by them be kept.

And the Pix shall remain in a Chest or Room, as aforesaid, to be opened on reasonable Warning, when his Majesty, or his Council shall appoint.

And Assays shall be made in the Presence of the Warden, Master, and Comptroller, of the Fineness and Weight of the Gold and Silver in the Box by Fire, Water, Touch or Weight, or by all ; that if they be found good, the Master be quit against his Majesty and all his People to that Day ; and the Master then to have Letters Patent for his Acquittance, without Fee ; and this Indenture to be a sufficient Warrant for putting the Great Seal thereto.

If the Money shall not, on the Assay, be of the full Standard, yet within the Remedies aforesaid, the Lack thereof shall be entered on Record, by the Warden and Comptroller, or whom they shall appoint, and a true Account thereof shall be made to his Majesty, and the same be fully answered to his Majesty, without any Profit to grow to any other Person for the same.

Saving, that in Case by the said Assay, it shall be found, that the same Monies do pass at any Time the said Standards, so as to be better, but yet within the Remedies, then so much shall be entered of Record, and hold Place to the Master, in the Charge which he shall have, when any Lacks shall be found by the said Assay under the Standard.

If any Default be found in the said Monies, without the said Remedies, the Master shall make Fine and Ransom to his Majesty at his Will.

The Warden, Master and Comptroller, may take up as often as they will, as many Gravers to grave Irons at his Majesty's Price, and as many Smiths, Workmen and Labourers, and Necessaries for making the said Iron and Monies, and doing all Busineses in the *Mint*, as they shall think fit, and punish or remove them as they shall think fit, on due Occasion; and all his Majesty's Officers are to be aiding to them therein.

The Master is bound to receive all Gold and Silver brought to the *Tower*, after the Value as it shall appear by the Assay to be better or worse than the Standard.

And in Case of Dispute of the true Value between the Master and Merchant, his Majesty's Assay-master, in the Presence of the Warden, Master and Comptroller, shall try the same; and the Mas-

ter shall receive the same, and stand charged in Manner as it belongeth.

All Officers of the *Mint* and their Servants, and all Persons bringing Gold or Silver to the *Tower*, shall have free Ingress and Egress at all Times, without any Arrest for Debt or other Matter, by the Officers of the *Tower*, and without any Fee.

The Warden, Master, and Comptroller, are bound to give their Attendance at the *Mint*, every *Wednesday*, or such other Days, as they shall appoint, for Receipt of Bullion, and Delivery of coined Monies.

The Master is to pay 52 *l.* *per Annum* towards the Charges of the Diet of 104 *l.* heretofore allowed to the Officers of the *Mint*, and his Majesty is to pay and allow the other 52 *l.* to be paid by the Warden.

The Warden to account yearly before the Auditor of the *Mint*, and to be allowed on the same, all Payments, and Receipts, vouched by the Master, Comptroller, and Assay-master, or any two of them, whereof the Master to be one. And on stating and answering his said Account, the Warden to have Letters Patent of Acquittance, under the Great Seal, without Fee therefore.

Confirmation to all Officers of the *Mint*, of all Houses and Grounds, within the *Mint*, exempt from any Claim of the Officers of the *Tower*.

All Charters and Franchises also confirmed to them.

The Monies, Workmen, and all other Ministers of the *Mint*, to be ready to do their Work at the Warning of the Warden, Master, and Comptroller, on Pain of Loss of Franchise and Imprisonment.

The Gold and Silver by the Master delivered to the Monies to be coined, shall be in clean Plates, and delivered by Weight; and the

the Monies to re-deliver the same, when coined, in clear Pieces proportionably by the same Weight; and if any Thing lack of the same Weight, they are to content the said Master for the same, at every Deliverance at the Balance; and the Master then is to pay them their Wages. And to perform his Covenants to the King, and his People, the Master has taken his Oath in Chancery, and given Sureties in the Exchequer in 2000 *l*.

The Master covenants from Time to Time, to bring into the *Mint* convenient and sufficient Supplies of Gold and Silver, and make full Payments and Deliverance of all Manner of Monies, with all convenient Speed; and to bear all Manner of Waste about coining, according to the Allowances before specified.

The Warden is to pay the Officers of the *Mint* their Wages appointed.

The Master is bound to bring all the Gold and Silver, that he shall receive by Colour of his Office into the *Mint*, to be made into Monies without Sale, aliening, or putting it to any other Use:

Excepting all such healing Pieces, Seals, and Medals of Gold and Silver, as shall be made for his Majesty's Use, or by his Majesty's Command.

The Warden, when he shall think fit, is to make two Piles of *English* Weights, that may be done with the most Exactness, to be equal to those lawfully used in the *Mint*; which, when made, shall be brought to the *Tower*, and there examined and printed, with a Rose crowned, and a Thistle crowned, in Presence of the Officers of the *Mint*; and then the Warden shall deliver one of them to the General of the *Mint* in *Scotland*, to be carried thither, and remain there, and the other to remain in the *Tower* with the said Warden.

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The Master to account yearly before the Auditor of the *Mint*, and his Account being stated and fully answered, he shall have Letters Patent for his Acquittance without Fee, and this Indenture to be a sufficient Warrant to put the Great Seal thereto.

The Master is to pay from Time to Time, to the Warden, such Sums as shall be requisite to be paid to Officers for their Fees and for Repairs, and such other Expences of the *Mint*.

The Master is to retain in his Hands out of the Monies to be received on the Act for encouraging the Coinage, 1255 *l. per Annum*, for Fees and Salaries due to himself and other Officers.

The Warden, Master, and Comptroller, and their Deputies, shall, before their being admitted into the Knowledge of the Invention of rounding of his Majesty's Monies, and marking the Edges of them with Letters or Grainings, take an Oath before the Treasury, not to reveal the same to any Person whatsoever, directly or indirectly, without Command of his Majesty, his Heirs or Successors: And the Workmen employed in making the said Instruments, shall take the like Oath before the Warden of the *Mint*.

The Provost and Moniers, their Apprentices and Servants, are strictly charged not to vend, pay, or distribute any Piece of coined Money, until the same be delivered, according to the Course of the *Mint*, on Pain of losing their Franchise, and Imprisonment.

That no Person inhabit within the *Mint*, without the Approbation of the Warden, Master, and Comptroller.

The Comptroller is to deliver, on Oath, before one of the Barons of the Exchequer, a Roll, called the Comptroller's Roll, containing an Account of all the gold and silver Bullion, and Alloy molten, and all gold and silver Monies coined monthly in the *Mint*.

And the Master, or his Deputy, shall pay to such Workmen, as shall be employed in making of several gold and silver Pieces round, before they are sized, and marking the Edges with Letters or Grainings, and for keeping in Repair all the Rollers and Instruments to cut, flatten, make round, and size the Pieces, and to mark the Edges of the Monies with Letters or Grainings, and all other Tools, Engines and Instruments, such Allowances as shall be directed by the Treasury, not exceeding 6 *d.* for every Pound Weight Troy of gold Monies, and 1  $\frac{1}{2}$  *d.* for every Pound Weight Troy of silver Monies.

The Master is to pay to the Provost and Company of Moniers 1 *d.* by Tale, of every Pound Weight of all silver Monies to be coined, over and above the ordinary Price of 8 *d.* allowed them.

Provided that the Moniers, having the Gold and Silver delivered to them in clean Ingots, fit to be wrought, shall deliver Seventwelfths of the same in Money, so that there be but 5 Parts in 12 Sciffel.

The Clerk of the Irons is to keep a true Account of all the blank Dies for coining the gold and silver Monies which shall be delivered to the chief Engraver or Engravers of the *Mint*; and also of all the blank Dies, which shall be sunk or stamped by the said Graver or Gravers; and of all Dies, which, after sinking, shall be made fit for Use and hardened.

And the Graver or Gravers, are strictly enjoined to return monthly to the Clerk of the Irons, all Dies that shall from Time to Time be faulty and worn, to be defaced in Presence of the Wardens, Master, and Comptroller.

And the Clerk of the Irons is enjoined to give an Account to the Warden, Master, and Comptroller, of what blank Dies have been delivered to the Gravers, or sunk by them, or hardened by the

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Smith, and what faulty ones have been returned by them to be defaced, and what are remaining in their Hands.

The Gravers shall not make any Puncheons, Matrices, Dyes or Stamps, but in such Places of the *Mint* as shall be appointed by the Master, Warden, and Comptroller.

For the more exact fizing of gold and silver Coins, to be made by the Mill and Press, it is commanded, that the Counterpoise of the respective gold and silver Coins be made lighter than their just Weight, according to the Proportions following, *viz.*

That two Grains be taken from the Counterpoise of the Crown ;  
 One Grain from the Half Crown ;  
 Half a Grain from the Shilling ;  
 One Fourth of a Grain from the Six-pence ;  
 Two Grains from the Five Guinea Piece ;  
 One Grain from the 42 Shilling Piece ;  
 Half a Grain from the Guinea ;  
 One Fourth of a Grain from the Half Guinea ;  
 One Eighth of a Grain from the Quarter Guinea.

The Provost, and Moniers, and their Apprentices, are to attend Morning and Evening, in such Manner as the Master shall appoint, on Pain of being removed, or otherwise punished, as the Master, Warden, and Comptroller shall think proper.

These Agreements to be in Force only during his Majesty's Pleasure.

**FEES and SALARIES payable by the Warden.**

<b>T</b> O the Warden for himself	—	—	—	£. 400	0	0
More for a Clerk	—	—	—	50	0	0
To the Comptroller	—	—	—	300	0	0
More for a Clerk	—	—	—	50	0	0
To his Majesty's Assay-master	—	—	—	200	0	0
More for a Clerk	—	—	—	25	0	0
Weigher and Teller	—	—	—	130	0	0
More for a Clerk	—	—	—	12	10	0
Surveyor of the Meltings	—	—	—	80	0	0
More for a Clerk	—	—	—	12	10	0
Clerk of the Irons	—	—	—	40	0	0
Auditor of the <i>Mint</i>	—	—	—	40	0	0
His Majesty's Chief Clerk	—	—	—	60	0	0
Porter of the <i>Mint</i>	—	—	—	25	0	0
Clerk of the Papers	—	—	—	40	0	0
Minifter	—	—	—	4	0	0
Sexton	—	—	—	1	0	0
				<hr/>		
				£. 1470	0	0

**FEES and SALARIES payable by the Master.**

<b>M</b> ASTER and Worker for himself	—	—	—	500	0	0
For three Clerks	—	—	—	150	0	0
For one Assayer	—	—	—	60	0	0
For a Purveyor	—	—	—	25	0	0
Provost of the Moniers	—	—	—	100	0	0
Chief Engraver	—	—	—	200	0	0
Second Engraver	—	—	—	80	0	0
Smith-assistant to the Engravers	—	—	—	40	0	0
To another Clerk to the Warden	—	—	—	100	0	0
				<hr/>		
				£. 1255	0	0
				1470	0	0
				<hr/>		
				2725	0	0

*These are the constant Fees and Salaries of the Officers of the Mint ; and the Reader may observe, from the foregoing Abstract of the Indenture, that all the other Expences of the Coinage (except the Charges of providing and maintaining Houses, Offices, and Utensils) depend upon the Quantities of gold and silver Monies coined. Whatever these Expences are, they are greatly compensated by the Conveniency and Advantage that Trade receiveth from having a Coin, which is easy to be understood by all Degrees of People, and is adjusted to the Monies of Account.*

A BRIEF  
DISQUISITION

INTO THE  
Nature of GOLD and SILVER,

AND INTO THE  
Art of ASSAY and REFINERY;

WITH  
Other MATTERS requisite to the well Under-  
standing the QUALITIES of those METALS, and  
the avoiding Frauds therein :

BEING A PROPER  
SUPPLEMENT  
TO THE  
PRECEDING WORK.

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A B R I E F  
D I S Q U I S I T I O N  
I N T O T H E

Nature of G O L D and S I L V E R, &c.

**G** O L D, when fully matured or melted, hath neither a sulphurous or terrestrial Impurity; but while in a State of Concoction, it hath both joined to it, as appears in the native Ore: But then they do not so adhere as not to be separable from it, which may not be done in other Metals without destroying both, as the Involution or Mixture is so predominant in the latter, and so minutely found in the former.

*Gold* hath so little of these corruptible Principles mixed with it, that the inward Sulphur or metalline Spirit, doth sometimes overcome them of itself, as is to be seen in the Gold found pure on the Superficies of the Earth and the Sea-sands, often as pure as any refined Gold, and is washed down from the Mountains.

It is therefore the most noble and solid of all Metals, and when of the highest Degree of Fineness, is of a *deep yellow Colour*, compacted of Principles digested to the uttermost Height, and therefore fixed.

*Silver,*

*Silver*, in the highest Degree of Fineness, is a *pure White*, and in the next Degree of Dignity to *Gold*, and differs from it chiefly in Digestion, as there is some small adhering Impurities.

It is nevertheless a Mineral of that excellent Quality, that, when perfectly fine, it will endure melting a long Time in extreme Heat, with but very little Waste, which Quality is not in any other Metal except *Gold*, which, in Perfection, will endure the Fire with less Waste.

For these peculiar Excellencies, and their Capacity of being wrought into such a Variety of useful and ornamental Things, they are deservedly esteemed above other Metals, and being the most precious of Minerals, and most portable, are very justly made the Medium of Trade, and to answer all the Purposes of Purchases or Barter by a stated Value and Equivalence.

Our *Ancestors*, considering that *Silver* in its finest Degree, was too soft for Use and Service, being almost as soft as *Lead*, did contrive, at once, to harden it for Service, and, at the same Time, preserve its native Whiteness; and as too little Alloy left it too soft, so too much made it brittle, they, in a Course of various Processes, found the true Medium to be *Eighteen Penny-weight of fine Copper, to eleven Ounces two Penny-weight of the finest Silver*, making together one Pound TROY. By which Standard is understood that Expression in the Statute of *Eliz.* Cap. XV. *Not less in Fineness than that of eleven Ounces two Penny-weight.*

The first Contrivers and Fixers of this Alloy were the *Easterlings*, in the Time of *RICHARD I.* who came from the Eastern Part of *Germany*, and gave this Standard the Denomination of *STERLING*, and the Mark of the *Leopard's Head* is prescribed by the Statute 28 EDW. I. Cap. XX.

The *Standard of Gold* is settled by the above Statute of ELIZ. at *twenty-two Carraets fine.*

*Carraets* are the 24th Part of either a Pound, or of an Ounce Troy, and are thus compounded, of the *Pound CARRACTS* two Penny-weights and twelve Grains Troy make a *Carraet Grain*, four of such *Carraet Grains* make one *Carraet*, or ten Penny-weight Troy, and Twenty-four of such *Carraets* one Pound, or twelve Ounces Troy.

Of the *Ounce Carraets*, five *Troy Grains* make one *Carraet Grain*, and four of such *Carraet Grains* make one *Carraet*; and twenty-four of such *Carraets* make an Ounce Troy.

For the Discovery of false Gold and Silver from that which is good, and to know the true Value thereof, the Manner is, the Assay-master puts a small Quantity of Silver on a *Cople* or *Test* on the Fire, and when refined to the highest Degree of Fineness, taking it out again, he, with Scales, that will turn with the hundredth Part of a Grain, by the Waste of that small Quantity, computes how much Impurity or Adulteration is in each Ounce or Pound, from whence the Assay is taken.

The Assay of *Gold* is taken in the same Manner, and after being refined on the Cople, it is beat thin, and rolled up loosely, and then put into warm strong *Aqua Fortis*, which will purify it from the Silver, and the Gold will remain in the thin Plate, although very brittle.

#### Another Manner of ASSAY without FIRE.

Make several Needles of silver Wire, each of them about four Inches long, and as big as a large Pack-needle, of various Degrees of Badness of Alloy; as one Needle 3 *d.* another 6 *d.* a third 9 *d.* a fourth

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1 s. a fifth 1 s. 3 d. a sixth 1 s. 6 d. in the Ounce worfe than the Standard.

Thus composed.

dwt.	gr.		
9	—	12 of sterling Silver	} These melted together will be 3 d. worfe than Standard.
0	—	6 of Copper	
0	—	6 of Brass	
9	—	0 Sterling Silver	} These 6 d. worfe than Standard.
0	—	12 Copper	
0	—	12 Brass	
8	—	12 Sterling Silver	} These will be 9 d. worfe than Standard.
0	—	18 Copper	
0	—	18 Brass	

And so by such Degrees of a Penny-weight of Alloy in the Ounce, you may compose several Alloys; for 4, 6, 8, 10, 12, 14, or 16 Needles, differing 3 d. in the Value of each Needle by the Ounce, and the surest Way is, when the Needles are all made to have a distinct Assay made of each Needle, and the reported Goodness marked on each of them.

Make these Needles all with Loops at one End, and hang them on a Ring of silver Wire, and all with blunt smooth Points.

The *Silver* you would try by these Needles, rub on a smooth clean Touch-stone, then by it rub the Needles as you judge nearest the Test, and so continue the Experiment, until you find the Touch of the coarse Silver and the Needle to be alike; then for the Value refer to the Mark on your Needle.

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A compleat Ring of Needles may be made under the Weight of two Ounces, and if prettily formed and ingeniously managed, will make a Discovery very near of the Badness of any Sort of adulterated Silver.

In the same Manner small Pieces of Gold of several Alloy, may be fixed at the Ends of the silver Needles, for the judging the Degree of Adulteration in Gold.

As to a *general Judgment* of the *Fineness* of SILVER, you may try it thus; rub some Place least in Sight, with a File of indifferent Fineness, and if it be *worse* than *Sterling*, it will appear *yellowish*, or after filing it, rub it on the Touch-stone, and close by it rub the Edge of a Half-crown, or other Piece of standard Silver of like Thickness, and the Difference, if any, will appear.

The Reason of filing is, because that the artificial boiling of coarse silver Work, will so eat or dissolve the Alloy that is on the Surface or Out-side thereof, that unless it be filed, it will touch on the Stone Six-pence, or Eight-pence in the Ounce better than it is.

There is good Cause to suspect the Coarseness of the Silver, when the Work rises in Blisters, or peels, or scales off in thin Scurf, or flakes, which Scale, Scurf, or Blistering, is caused by the eating the Alloy as aforesaid; and the Silver thus separated from the Alloy will remain of an infirm spungy Body, therefore peel as aforesaid.

*Touch-stones* are usually purchased of the *Ironmongers*; the best Sort are very black, and of a fine Grain, polished very smooth, and without any spungy or grain Holes, and near the Hardness of a Flint, but yet with such a sharp cutting Grit, that it will cut or wear the Silver or Gold when rubbed thereon.

To make a true Touch, take Care that the Stone be very clean, and to make it so, if foul or foily, first wet it, then rub it dry with a clean woollen Cloth; if the Stone be very hard, and is full of Touches of Gold or Silver, you must rub them off with a Pumice-stone; if not very hard, rub them first with a fine blue Hone, and then with a well-burnt Charcoal in Water, and observe that the smoother you make the Touch-stone, the clearer will be the Touch; therefore, whether you use the Pumice, Hone, or Charcoal, prepare them very even, and rub them on the Touch-stone very lightly; and if there be any Grain, cross it lightly, then your Silver being filed, rub it steadily and very hard on the Stone, not extending the Touch above a Quarter of an Inch long, and no broader than the Edge of a Five-shilling Piece; and when you have touched with the several assay'd Needles, wet all the touch'd Places with your Tongue, and each will respectively shew itself in its proper Countenance.

The *Gold-standard*, by Law, is twenty-two *Carraets* of the finest Gold, and two *Carraets* of *fine Copper* and *Silver* equal Parts; and by this may be clearly understood that Expression in the Statute 18 ELIZ. Cap. XV. *not less in Fineness than that of twenty-two CARRACTS*, to be the Standard for all gold Wares, worse than which Alloy no gold Wares are to be made on the Penalty therein mentioned.

And if any Persons are desirous of having what they have purchased either of gold or silver Wares assay'd, they may apply to the *Affay-master* at *Goldsmith's-Hall*, whose Fee is Six-pence an Assay of Gold, and if refused, or dissatisfied with the Operation, they may apply to the Assay-Master of the *Mint* in the *Tower*, whose Fee is for a gold Assay One Shilling, and for Silver Six-pence.

And

And here note, that twelve Grains Troy is sufficient for an Assay of Gold.

The Assay-furnace is either made with Brick upon a Chimney-hearth, or in an Iron-case, thick and well luted, removeable to any Place at Pleasure, the Inside round or square, about six or seven Inches over, and about twenty Inches high; at the Bottom must be an Air-hole five or six Inches wide, and three Inches high, and at about eight Inches high within must be a Grate fixed, and even to it; over the other must be another Air-hole about three Inches square, without which must be a Space to lay some burning Coals, upon which Grate must be placed a *Muffle*, which may be made of a large three-square Crucible, with a Hole a Quarter of an Inch wide in each Side, and one such Hole in the small End: Or the *Muffle* may be made of broken Crucibles, finely powdered and tempered with a fifth Part of Tobacco-pipe Clay, flat at Bottom and circular over, with three Holes as the former; dry it well in the Shade, and then Neal it in a gentle Fire. The Mouth of the *Muffle* must be closed with Lute to the upper Holes, resting upon the Grate as aforesaid, and a Space must be by the Sides and further End of the *Muffle*, sufficient to permit the Fire to be strong on the Grate, as above the *Muffle*, and the Charcoal, gently kindled, will not break the *Muffle*; and a Fire must be always before the *Muffle*, to make the Heat equal on the *Cople*.

The Manner of making the *Cople* or *Tests* is this; Take of Sheep Bones that are burnt very white, beat and sift them to a fine Powder, which moisten with Water to such a Degree, that when well chafed between the Hands, or with a Piece of Board on a Table, that being grasped in the Hand, it will be clammy, and hold together without wetting or sticking to the Hand. Then take a round flat Piece of Brass an Inch thick, and three or four Inches over, thro' the Centre whereof make a taper round Hole, the one End near as

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wide

wide as a Crown, the other as a Half-crown Piece, which Hole polish very smooth; lay the Brass on a level Anvil, the widest End of the Hole uppermost, fill it with the prepared Bone-ashes, and press it hard with your Hand, have a drift Pin of Brass made globular at the lower End, and a Shoulder round it to rest upon the Edge of the Hole to keep the round End from running in too far, then drive it down into the prepared Ashes with a wooden Mallet, and, if well executed, it will unite the said Ashes into a *Cople*, and the Top thereof will be hollow, like the Vessel called a Skimming-dish; then with your Thumb thrust the *Cople* out of its Case, and set it on a loose Board on a Shelf, and, when thorough dry, it will be hard; and, when used, kindle the Fire gradually, or put it in by Degrees, to prevent its cracking or cleaving.

Here note, that when the Silver is fined to the highest Degree, and cold on the *Cople*, it will appear bright and clear from the least Sully or darkish Colour, and of the Countenance of pure Tin.

And note further, that the Assay-scales must turn with the 740th Part of a Grain Troy; and that the Standard Assay-weight being in one Pan of the Scale, the Weight of Alloy in 12 Grains of Standard must be in the other, with the refined Silver; and if that makes the Balance even, then the Silver from whence it was extracted is Standard. The same Method is to be used in assaying of Gold.

It is not lawful to use any other than Troy-Weight for the weighing of Gold and Silver, of which

24 Grains make an Old Sterling Penny, or three Penny-weight,  
20 Penny-weight one Ounce,  
12 Ounces one Pound.

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The compounding these Weights for the assaying and computing the Standard of Gold as abovesaid, are called *Carraets*.

There are other Sort of *Carraets* compounded of Troy-grains, thus;

- 4 Grains make a *Carraet*,
- 6 of such *Carraets* make a Penny-weight,
- 120 of such *Carraets* make an Ounce Troy.

These are only used to weigh Diamonds, &c.

There are other Sorts of Weights by some used amongst us, called *Venice* Weights, and are made in Nests of the same Fashion as the Nests of Troy Ounces are, and every one double the Weight of the next lesser, but in another Respect very different, as the Ounce contains but thirteen Penny-weight and One-half, and are fraudently, and without any Authority, used by the Sellers of gold and silver Lace, but may, on Inspection, be distinguished from the others; as the true Standard *Troy-Grain* is marked G, with a Coronet on the Head of it; the *Penny-weights* with as many O's as they contain, as also is, or should be, a Lion on every Weight; the *Ounce*, and every one upwards, are marked with numeral Letters of such Numbers as the Piece contains Ounces, and also every Weight marked with two Letters made thus (T) for Troy, and are, or should be, marked with the *Lion* and *Leopard's* Head crowned. The Standard of these Weights is kept at *Goldsmiths-Hall*.

The *Averdupois*, is the Weight commonly in Use for all Commodities, and differs from the Troy in the following Proportion;

Troy Ounce	—	—	20 Penny-weight,
Averdupois ditto	—		18 ditto,
Troy Pound	—	—	12 Ounces,
Averdupois	—	—	16 ditto.

I

But

But these last not concerning Gold and Silver, are only mentioned by Way of Distinction.

And here it is to be particularly noted, that the most common Frauds in silver Ware, and most to be guarded against, are such as Sword-hilts, Buckles and Buttons of all Sorts, Clasps, Verrils, Snuff-boxes, Instruments and Cases, and all other Kind of small Works, by which the Artificers acquire many Thousands in the Year, owing to the common Negligence or Ignorance of the Buyers or Wearers : But as any one may have ample Remedy, by first getting the Commodity assay'd, and then by Action, Indictment, or Information, so it is left to the Injured to consider how far they will suffer themselves to be defrauded with Impunity.

As to bad Money, it may be in Weight or Quantity, as well as in Alloy or Quality. The Weight of gold Coin may be lessened either with filing or Dissolution, and either so as not readily to be perceived ; as to the Manner of its being done is not proper to make public, as too many know it already. The Quality is observed before to be proved by Assay, and the Quantity must be judged of by the Weight already given. Besides these, an Artist can gild to so high Perfection, as to stand the Test of the common Touch : If this be suspected, you must file the Edge before you try the Touch, as is directed in the Case of Silver ; or try it by the Standard-weight, or both occasionally.

As to *silver Coin*, it being not above a fifteenth Part equally valuable as *Gold*, or thereabouts, needs not so attentive a Regard, and will sufficiently prove its Badness, if base, by the Chink, as not sounding upon a Table like Silver ; especially if it be of other Metal plated over, then the Sound will be dead and flat, by Reason of its Disunion from what it is laid upon ; and if it be mixed and of a very gross Alloy, it may be discovered by the Impurity of its  
 Af-

Aspect, and at last you have the Remedy of the Goldsmith's Tool, the File, and the Touch, as before directed. However you must observe, that even pure Standard Coin will not sound in the Chinking, if it be flawed.

The Value of Gold has put the Ingenious upon all experimental Methods of Ascertainment; and in Consequence its Weight has been fixed, by proportioning it to the Gravity of other Bodies; which thoroughly understood and attended to by those who deal much in foreign *Gold* and *Silver*, especially on the *Guinea Coast* and in *China*, will need no other Assay for the knowing of *pure GOLD*. The *Proportions* are,

Water to Gold as 19,636 to 1000.

Hence the specific Gravity proportionate of several Metals by this Means determined, stand thus;

Gold	—	19,636	—	Iron	—	7,852
Quicksilver	—	14,019	—	Tin	—	7,321
Common Lead	—	11,345	—	Diamond	—	3,400
Standard Silver	—	10,535	—	Water	—	1,000
Copper	—	8,843	—	Air	—	$\frac{3}{17}$ Gr. $1 \frac{1}{5}$ N.

When reduced into the cubical Inch their Weights are

Gold	—	—	12 Ounces	—	2 Drachms	—	52 Grains
Quicksilver	—	8	—	—	6	—	8
Lead	—	7	—	—	3	—	30
Silver	—	6	—	—	5	—	28
Copper	—	5	—	—	6	—	26
Iron	—	5	—	—	1	—	24
Tin	—	4	—	—	6	—	7

Observe, that when you, by the above Proportion, weigh Metals against Water, that it be not highly impregnated with any Kind of Mineral or other Impurities, it having been demonstrated that even River-water weighs more by 3 Pound in 53 than Rain-water; so that where clear Water cannot be had, it may be best to throw out the Fraction, and balance only by 19 to 1.

Mr. VAUGHAN supposes that ARCHIMEDES, by an Experiment of this Kind, discovered the Quantity of Alloy put by the Workmen into the Crown of Gold made for HIERON King of SYRACUSE.

And that it is in this Manner the CHINESE reconcile themselves to the Difuse of coined Money, and traffic in Metals by Measure and Weight apportioned, as first reducing the Gold to Powder, they measure and weigh it mechanically, and from thence readily conclude what Alloy or Mixture is therein.

It is certainly a Practice of ancient Date, and respected many Things as well as Money, as we find the same considered by the Reverend Mr. BARLOW in the *Philosophical Transactions*, whose Manner of stating it, is to the following Effect :

A cubic Foot of Water weighs,	Pounds 62	8 Ounces
	which multiplied by	32
	produces	— 2000 or a Ton-weight.

Agreeable whereto are Liquid-measures accommodated.

Eight cubic Feet of Water	—	1 Hoghead,
Four Hogheads	— — —	1 Ton,

In Capacity and Denomination as well as Weight.

Dry-

Dry-measure on the same Model.

A Bushel of Wheat as the common Standard 62 8 — — —

Eight of such Bushels — — — 1 Quarter,

Four Quarters — — — 1 Ton.

(1) The *Chaldron* of *Coals* was likewise intended to be equal to a Ton-weight, and may be so still in some Cases; and the Excess perhaps owing to the giving of heaped instead of stricken Measure: So in Wheat, there is in many Countries an Excess of  $\frac{1}{5}$  Part, owing probably at first to a benevolent Custom of throwing in a Blessing, as a Donative over and above the Measure is usually

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(1) If a Chaldron of Coals was originally equal to a Ton-weight, then either the Weight of the Bushel is less than that of Wheat, or the Quantity of Bushels have been increased; as 36 Bushels, the Quantity in the present Chaldron, at 62 lb. 8 oz. to the Bushel, being 250 lb. or four Bushels over the Ton-weight: Therefore either the Number of Bushels have been increased, as in the Measures and Weights above, or a Bushel of Coals will be only 55  $\frac{3}{8}$  Pounds Avoirdupois. But as Mr. BARLOW's Calculation, and other concurrent Circumstances presenting, it evidently appears, that the Standard Weight for a Bushel was 62 lb. 8 oz. and 32 such Bushels a Ton. So if Coals, or Grain in the Capacity of a Bushel, did not weigh 62 lb. 8 oz. the Bushel was to be judged of by the Weight, not by the Capacity; as indeed it was impossible to find Coals or Grain in an ascertained equal Measure, exactly accommodated to the Standard: So that Weight alone must be the Rule of judging what the Quantity ought to be in Measure. Therefore, if 32 Bushels of any Commodity does not weigh a Ton, so much more should be added as may complete that Weight.

The same Observation may be of Use in Respect to the specific Gravity of Bodies before-mentioned, and great Caution and Judgment necessary in the proportioning of them to each other, lest we therefrom make mistaken Calculations to our Prejudice, or to the Prejudice of others, as in Lead, Tin, Iron, Copper, &c. They are not in all Places of equal Gravity, or not refined as Gold and Silver is to a certain Standard: Nor is Air and Water at all Times and in all Places of equal Gravity; for which Reason great Care must be had not to take these Things absolutely from single Experiment, or to depend wholly on Theory.

called :

called : And as Donatives of this Kind usually grow upon the Seller, at length to the increasfing of the Bushel to five Pecks, so it has utterly destroyed the Analogy, and therefore ought to be reduced back to the original Standard. So again in Weights, by certain partial Allowances, the Hundred has acquired three different Denominations, and thereby rendered, as to this Purpose, quite incommensurate.

The old Standards falling into round Numbers, Mr. BARLOW seems to think happened luckily : But it may be seen in the Introduction, in respect to the old Money-standard, that it was the Wisdom of our Ancestors, to regulate by round Numbers, for a very honest Reason, *viz.* that the Ignorant in Arithmetic might not be injured by the Skilful in Fractions, and one common Standard equally known and easy to all, and clearly indisputable. I am therefore humbly of Opinion, that Care was taken to find out what Proportions would fall into round Numbers, that were adequate and commensurate, and thereupon established the Standards of Troy-weights, Avoirdupois-weights, and Measures.

It is with good Reason supposed by the same Gentleman, that Corn, and other Commodities, both dry and liquid, were formerly sold by Weight only, and that Measures were afterwards introduced for Convenience. It is, however, still the Practice of the ingenious Factor to buy Corn by Weight, though the Seller disposes of it by Measure. This the Purchaser performs by a Vehicle, the Contents whereof is a cubic Inch, filled with the Grain, and balanced in a fine gold Scale, by which he not only judges of the gross Weight on Delivery, but of the Goodness of the Grain before he purchases, and consequently its Value, according to the Market-price of the Day, as he finds the Weight in Proportion above or below 62 Pound 8 Ounces to the standard Bushel. And as it appears that the same Quantity of Liquor is a Ton, both in Weight and Measure, probably four Quarters of Grain had the same Appellation, which

readily accounts for what Measure the Quarter of Grain was the fourth Part, viz. of a Ton. It is hence, by the same Reverend Gentlemen very well observed, that it were to be wished, to avoid Confusion, that we might be obliged, by Law, to return back to this evidenced Analogy, and have again all our Weights and Measures equal and commensurate, the Monies on the Troy, and all other Things on the Avoirdupois Standard.

What our Standards are, as compared with each other, as also proportioned to those of *France*, will be seen in the following Disquisition, where I did not find it necessary to give other foreign Proportions, as the Reader will find that already done by the ingenious Author before he comes to this Part, which, I hope, will appear a full and satisfactory Completion of this Subject.

The Proportion of the *English* and *French* Weights, and of the *English* Weights to one another, as adjusted by the *Royal Society*.

Some curious Gentlemen of the *Royal Society* of *London*, and of the *Royal Academy* of *Sciences* at *Paris*, having proposed to their respective Bodies, that accurate Standards of the Weights and Measures of both Nations, carefully examined and made to agree with each other, might be laid up and preserved in the Archives of the *Royal Society* here, and in the *Royal Academy* at *Paris*, the same was accordingly put into Execution, and agreed thus ;

		Troy Grains.
<i>Paris</i> 2 Marks 16 Ounces Weight, contains <i>English</i>	—	7560
<i>English</i> Troy Pound of 12 Ounces	—	5760

So that the *English* Pound Troy is to the *French* Double Mark as 16 is to 21.

Again :

The <i>Paris</i> Ounce weighs <i>English</i> Troy Grains	—	472.5
The <i>English</i> Troy Ounce contains	—	480

K k

So

So that the *English* Troy Ounce is to the *Paris* Ounce as 64 to 63. (2)

The *English* Avoirdupois Pound weighs Troy Grains 7004  
The Avoirdupois Ounce, 16 to the Pound = Troy Gr. 437—75

Consequently the Troy to the Avoirdupois Pound is as 88 to 107, nearly.

As also the Troy to the Avoirdupois Ounce, as 80 to 73, nearly.

Or thus, as to the Pounds;

As 88 to 107 — so 5760 to 7003.636;

Or as to the Ounces;

As 80 is to 73 — so 480 to 438.

And the Avoirdupois Pound and Ounce to the *Paris* 2 Marks Weight and Ounce as 63 to 68 nearly;

For as 63 to 68 — so 7004 to 7559.873.

But as some Gentlemen were desirous to know how far these Standards agreed with the Originals in the *Exchequer*, at *Founders-HALL*, and in the *Tower*, the following further Experiments were made in the Presence of several Persons of Distinction.

#### At the EXCHEQUER.

A large BALANCE, loaded with fifteen Pounds at each End, turning with six Grains, and a lesser Balance turning with  $\frac{1}{2}$  Grain, were used for this Purpose.

(2) An Experiment made by our Author, 1738. I sent 2000 *Pesos Mexican* Dollars, weighing at *Cadiz* 234 Marks 4 Ounces, and at *London* 1735 Ounces, to *Rouen*, which in the Mint there weighed 220 Marks 3 Ounces, or 1763 Ounces, which corresponds with the above Proportion:

For if 63 *English* are 64 *French*, then 1735 are 1762  $\frac{3}{4}$ .

Troy oz. dwt. gr.

The Standard 14, and 1 Pound Avoirdupois equal to 218 13 23  $\frac{1}{4}$

---

Therefore the Avoirdupois Pound equal to — — 6998,35  
 Troy Grains, whereof 480 are contained in the Ounce — —  
 And the Avoirdupois Ounce of 16 to the Pound = 437, 4

Troy Ounces dwt. gr.

Again, the 7 Pound Bell Avoirdupois, equal to — 102 1 21

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Thus the Avoirdupois *Pound* equal to — 7000. 7 }  
 And the *Ounce* to — — — 437.54 } Troy Grains.

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Again, the single Bell, Avoirdupois Pounds, by the smaller Scales,  
 was found

	Troy Ounces	dwt.	gr.
equal to	—	—	14 11 18
or to	—	—	7002
and the Ounce to	—	—	437.62

---

The Bell Avoirdupois Pound, as above	—	7002	} Troy Grains.
The flat Avoirdupois Pound	—	6999. 5	
Difference of the flat and Bell Pound	—	2. 5	
And the Ounce	—	437.46	

---

The Royal Society's Avoirdupois Pound less than the Exchequer Bell Pound 1 Grain,

And their Troy Pound less than the 8, and 4 Ounce together  $\frac{1}{2}$  Grain.

#### At FOUNDERS-HALL.

They have from the Exchequer sealed a Pile of flat Brass *Troy-Weights*, from CCLVI Ounces down to the 16th Part of an Ounce :  
 As

As also a Set of Bell Brafts *Avoirdupois Weights*, sealed in the same Manner; and the large and small Balance as above: And here it was found on a Medium of four Trials, that 15 Pounds Avoirdupois was counterpoised by 218 Troy Ounces, 15 Penny-weight, and 23 Grains: Whence the Avoirdupois Pound is found equal to 7001.53, and the Ounce to 437.59 Troy Grains.

	Troy Ounce dwt. gr.		
The Avoirdupois fingle Pound equal to	—	14	11 16 $\frac{1}{2}$
Or was equal to	—	—	7000.5
And the Ounce to	—	—	437.53

This Standard Avoirdupois Pound at a Medium, as before, out-weighed the *Royal Society's* Avoirdupois Pound by 2  $\frac{1}{2}$  Grains; and the Troy Standards of 8 and 4 Ounces taken together out-weigh'd the *Royal Society's* fingle Troy Pound by 2  $\frac{1}{8}$  Grains at a like Medium.

At his Majesty's Mint in the TOWER.

Their Standard Weights are a Pile of hollow Troy-weights, CCLVI Ounces down to the 16th Part of an Ounce, without any Penny-weights or Grains.

The *Royal Society's* whole Pound weighed less by 2  $\frac{1}{2}$  Grains than the Standard 8 and 4 Ounce Weights together.

The *Royal Society's* Avoirdupois Pound, weighed

	oz. dwt. gr.		
Troy Weight by these Standards	—	—	14 11 16 $\frac{1}{2}$
Or	—	—	7000.87

The *Royal Society's* Pile of 16 Ounces Troy less than 16 Ounces these Standards — — — Grains 4  $\frac{1}{2}$

And

And the *Society's* 8 Ounce and 4 Ounce-weight together less than their single Troy Pound-weight by  $\frac{1}{4}$  of a Grain. (3)

And here I have only left to add, that, for the better understanding our Money-weights, and how the same are varied in Denomination or compounded from, the Reader will be pleased to observe, that the Pound-weight Troy is thus divided and reduced into the lowest Quantities and Denominations in Use at the *Mint*.

Troy	{	12 Ounces	—	—	1 Pound,
		20 Penny-weight	—	—	1 Ounce,
		24 Grains	—	—	1 Penny-weight,
		20 Mites	—	—	1 Grain,
		24 Droits	—	—	1 Mite,
		20 Perlots	—	—	1 Droit,
		24 Blanks	—	—	1 Perlot.

These are again for the weighing of Gold compounded into Caracts; and stand thus in Pound and Ounce Caracts:

Pound Caracts.

24 Caracts	—	is	12 Ounces Troy,
1 Caract	—	is	4 Grains,
1 Caract Grain	is	2 Penny-weight	12 Grains Troy,
$\frac{1}{2}$ Ditto	— —	is	1 — — 6,
$\frac{1}{4}$ Ditto	— —	is	— — — 15.

(3) During my Residence in *Spain*, I observed that every Year, there was something to rectify in Peoples Weights, and that *Spanish* Dollars consequently were of more or less Value. I suspected this to be a Management of the CONTRASTE at *Cadiz*, who is the Inspector of Weights, and that he made now and then some little Alteration, for the Sake of having more Business, or for other partial Reasons, which however but ill suits the Exactness requisite in commercial Transactions. It is much to be wished, that every Nation had a certain immutable Standard of both Weights and Measures, and the Proportions to each other regularly adjusted. N. M.

## Ounce Caracts.

24 Caracts	—	is	1 Ounce Troy,
1 Caract	—	is	4 Grains,
1 Caract Grain		is	5 Grains Troy,
$\frac{1}{2}$ Ditto	— —	is	$2\frac{1}{2}$ Ditto,
$\frac{1}{4}$ Ditto	— —	is	$1\frac{1}{4}$ Ditto.

The GOLDSMITHS Weights are made, compounded, and denominated thus : From the Standard at *Goldsmiths-Hall*, into Grains, Penny-weights, Drachms, Ounces and Pounds, and vary from the first Table only in the Denomination of Drachms, which Drachm is equal to one Penny-weight and six Grains Troy ; and consequently sixteen such Drachms make an Ounce Troy.

The GRAINS are usually proportioned from half a Grain to six Grains, and should be marked with as many O's as there are Grains, and each Piece with a G coronetted.

The PENNY-WEIGHTS are usually proportioned from an Half to Five, and the Quantity each contains marked with so many O's, and the Portrait of a Lion on every Piece.

The OUNCE-WEIGHTS are proportioned from a Drachm to 32 or sometimes to 64 Ounces ; thus,

A Drachm,  
Half-quarter of an Ounce,  
Quarter of an Ounce,  
Half an Ounce,  
One Ounce,  
Two Ounces.

And

And so every one double the Weight of the next ; and every one from an Ounce upwards are marked with numerical Letters of such Number as the Piece contains Ounces ; and also with the combined Letters  $\overline{R}$ , for Troy ; and are, or should be, marked with a Lion and Leopard's Head crowned.

The POUND-WEIGHTS are proportioned from one Pound, or 12 Ounces *Troy*, to 32 Pounds, or sometimes higher ; and each double the Weight of the next lesser, as in the Ounce-weights, and should have the same proportionate Marks.

The Reason of being so circumstantial, in Respect to Weight and Measure is, not only to instruct the young Trader in a certain Specie of Knowledge, essentially necessary in a Course of Business, but also to intimate more strongly the apparent Necessity of a general Regulation ; which, if obtained, will materially contribute to the adjusting of the Analogy between *Great-Britain* and those Nations with whom we trade, free from the unnecessary Perplexity of diffuse Calculation, and at the same Time dissolve many of the Difficulties, which has occasioned the Construction of the preceding Performance.

*F I N I S.*

And every one should be the Weight of the rest: and every one from an Ounce upwards be marked with numerical Letters of Gold: Number as the first contains Ounces: and this with the same Gold Letter A, for first, and so, or should be marked with Iron and Lead: the first crowned.

The second weights are proportioned from one Pound, or 16 Ounces, to 1/16 Pound, or 1 Ounce, and each double the Weight of the next lesser, as in the Ounce weight, and should have the same proportionate Marks.

The Reason of being so circumstantial in respect to Weights and Measures is, not only to instruct the young Trader in a certain degree of Knowledge, especially necessary in a Court of Justice, but also to instruct more strongly the apparent Necessity of a general Regulation: which is observed will necessarily contribute to the safety of the Affairs between Great Britain and those Parts with whom we trade: and from the necessary Liberty of the Colonies, and at the same Time dissolve many of the Disputes which have attended the Constitution of the preceding Parliament.

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M m

DAY

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